Maine Inland Fisheries Management Program

2002 Review

Prepared by the

Management Assistance Team of the International Association of Fish and Wildlife Agencies

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FOREWORD

The following report is a summary of the intent, methodology, findings and recommendations of an independent review of the Inland Fisheries Management Section (IFM Section) and its program within the Maine Department of Inland Fisheries and Wildlife. Initiated at the request of the Maine state legislature (S.P 401-L.D. 1317), the review was begun by the Management Assistance Team (MAT) in September 2002 and completed in December 2002. The intent of the review was to conduct an assessment of the IFM Section, providing a thorough critique of the present program, its strong points and needs for improvement.

MAT is a unique consultancy working exclusively for state fish and wildlife agencies. It is based upon the premise that one way to increase the effectiveness of fish and wildlife restoration is through better agency management practices. Since funding is provided by a multi-state conservation grant, state fish and wildlife agencies do not need to pay any additional costs for MAT staff time, travel or per diem. MAT was selected to conduct the review through a request for proposals process implemented by the Maine Department of Inland Fisheries and Wildlife.

The scope of the review included a comprehensive look at the IFM Section's legislative mandates and associated responsibilities, resource monitoring and management methods and capabilities, program planning and implementation, fisheries management opportunities, policies, funding levels/budget process, structure and staffing, management decision processes, public involvement processes and accountability, public outreach, internal agency relations and relations with external publics. In addition, agency work culture and paradigms as well as information processes, employee development processes, and reward systems were investigated to assess the best leverage points to increase the program's effectiveness.

Recommendations were requested at two levels: 1) Within existing constraints of funding and staffing levels and 2) With additional resources in a prioritized fashion. The focus of the review was neither to enumerate all of the fisheries section's strengths nor to identify every area of weakness. The focus of the review reported here, as in any program undergoing a comprehensive review for the purpose of improving its effectiveness, was to focus on *finding the leverage points for improvement* thus ensuring a greater return on the agency's investment of time, dollars and human resources.

It was the effort of many people and a spirit of true collaboration that enabled this review to be completed. The Management Assistance Team thanks all who had a part in this endeavor, and acknowledges the courage exemplified by the frank and honest responses received to all focus group and interview questions.

Executive Summary

The Maine Inland Fisheries Research and Management Section and its program (referred to as IFM Section) like many of its counterparts across the United States is at a transition point as it begins to address the emergent issues of the 21st century. Some of these issues are driven by consumptive pressure. Others are driven by environmental variables, and yet others are driven by the need for fiscal efficiencies. This 2002 comprehensive review of the IFM Section captures the present dynamic and creates a baseline of information, both of a perceptual and empirical nature, upon which a 21st century strategic imperative can be built.

The Management Assistance Team finds that ***the overall system of resource management within the IFM Section's program is functioning acceptably.*** Naturally, some parts of the program's system are stronger than others. There are some specific parts that require immediate change less they continue to block the effectiveness of the rest of the system. These are discussed in the full report.

There are two fundamental dimensions of the IFM Section: (1) Technical resource management, and (2) Organizational management. Findings of the review indicate that technical management is working well. Sound science principles and methodologies are applied in carrying out the inland fisheries program. Conclusions from the review are that Maine's inland fisheries are biologically well managed within the limitations of the Division's financial resources. It is apparent that some resource needs are going unmet, for example, river and stream management and habitat protection in some areas. Along with other needs these can be addressed only by additional funding and staffing.

Most of the thirty-six (36) recommendations for improvement offered in this report focus on the organizational management dimension.

The Commissioner's ideas and directives to improve the IFM Section are strategic and timely. The IFM Section is also very fortunate to not only have very experienced and competent fisheries professionals, but ones who have insight into the program's institutional history and evolution. This becomes exceptionally critical when making decisions to address present emerging issues, as well as those of the future — Issues which must be grounded in knowledge of the agency's past policy, practice, and structure.

Three areas within the IFM Section are found in greatest need of improvement. Discussed in detail as chapters in the full report, these areas are in order of priority as follows:

- Leadership and Personnel Management
- Decision-Making Processes
- Communications

Five Critical Imperatives

Five critical imperatives or calls to action emerge from the study and are targeted in the recommendations. ***The first imperative is to plan for the timely transition of current senior science professionals.*** Critical to this transition is the passing along of both institutional memory and current best practices to the next generation of scientists responsible for the fisheries resource and serving the attendant needs of the public. Structure, staffing and supporting systems of the IFM Section need to insure that personnel who have unique insights, identified as critical to the transition, be reassigned.

The second imperative is that the 21st century will place demands on fisheries resources in unprecedented intensity and uniqueness, making critical ***the need to identify the overarching current goals and their next evolution***. Findings of the review show an *absence of functioning overarching guidance* within the Division for the IFM Section, connecting all parts to the whole system. Ancillary to this is the prioritization of programs and actions, potentially unique to each region, to be aligned with this evolution of goals. *Caution must be taken to avoid thinking of the newly forming strategic plan as a panacea for such guidance.*

The third imperative is that scientists, particularly senior scientists, continue to engage the publics to develop a short and long-term strategy for managing and renewing fishery resources. Critical will be the identification of potentially new skill sets which must be introduced into the scientific community along ***with the evolution of more effective guiding philosophies such as in customer service and public involvement.***

The fourth imperative is to institute means of insuring greater accountability for the execution of directives at the administrative levels, and tracking performance at the field level.

The fifth imperative is to garner the support necessary to get the funding to expand the program to address unmet resource needs.

Recommendations

Adjustments to support/leverage the continuation of current best practices, as well as to improve areas found in need by the review are listed in relative order of priority; however, it is strongly suggested that the Department begin acting immediately on any of the recommendations considered doable rather than moving sequentially through them. The achievement of small successes as quickly as possible should not be undervalued.

INTRODUCTION

Background

The Inland Fisheries Research and Management Section (IFM Section) is part of the Fisheries and Hatcheries Division (Division) of the Bureau of Resource Management (Bureau) within the Maine Department of Inland Fisheries and Wildlife (Department). Although the origins of the Department date back to the 1830's, it wasn't until 1951 that the (Inland) Fisheries Research and Management Division was organized and funded.

The Division, and hence the IFM Section, assumes it's primary focus or responsibility from that of the overall Department, which is derived from statutory mandates included in 12MRSA, Part 10, Chapters 701-721, and related subject matter. The basic mandate (Chapter 702, Section 7011) that guides the IFM Section is: "to preserve, protect and enhance the inland fisheries and wildlife resources of the State; to encourage the wise use of these resources; to ensure coordinated planning for the future use and preservations of these resources; and to provide for effective management of these resources." In Section 7013, paragraph 2, fisheries management is specifically charged with "...management of the inland fisheries resource in the public waters of the State for their preservation, protection, enhancement and use."

Aquatically speaking, Maine is rich. Referred to as a "wet" state, Maine has approximately 5,800 lakes and ponds of one acre or more in size, totaling over 992,000 surface acres, and over 31,000 miles of rivers and streams. This abundance of aquatic habitat includes 2,772 great ponds (lakes of 10 acres or more) totaling over 982,000 surface acres, mostly under public ownership.

Maine's freshwaters are currently home to at least 61 fish species. Species numbers may change as new species are added to the list through unauthorized and/or accidental releases. Twenty freshwater species are classified as sport fish and are actively managed by the Division for roughly 270,000 annually licensed anglers. And, many more anglers hold lifetime licenses or are license-exempt.

Overall, the Department has 327 authorized staff positions. The Fisheries and Hatcheries Division has 61 positions; 25 of those are in the IFM Section. The supervisor for the Section is based in Augusta, two research staff are located in Bangor, and the remaining 22 positions are located around the state in seven regional offices with a focus on field work. The Department's overall budget expenditures for fiscal year 2002 were $27,012,000. Of this amount $2,867,000 was spent on the Inland Fisheries Management Program.

The IFM Section strives to base its management strategies on the most current information available, operating under a strategic plan that includes long-range

species management priorities, goals, and objectives. The current strategic planning effort includes management plans, or assessments, that cover nineteen species. Specific data and information needed to assess the current status of individual fish species are collected at the regional and state-wide level and are used to formulate management recommendations and regulation proposals. When possible, research studies have been conducted and results applied to gain a more complete understanding of the life histories, habitat requirements, and limiting factors affecting management of fish species. Surveys and inventories are also conducted to gain information on human use of the fisheries resource and to assess trends in land and water use practices that might impact fish species and associated management programs.

The regulation setting process is one of the key means of managing the fisheries resource. Many of the goals and objectives in the fisheries strategic plan are implemented through this process. Part of the management program for inland fisheries relies on a fish stocking program for selected species. This helps meet the growing demand for sport fishing in many parts of the state. The budget process is also a primary means by which the Division tries to address the IFM Section's goals and objectives. Recently, emphasis in the regions has been on improving quality (defined by catch rates, quantity and size) of fishing and providing geographic distribution of diverse fishing opportunities.

The IFM Section is characterized by a dedicated and hard working core of biologists. Many have considerable tenure in the job. Likewise, they work with an active and interested public constituency. Many have considerable tenure in sport fishing and/or avid and diverse interests in sport fishing matters. Some constituents are organized into a number of different sportsmen's, conservation, and other user groups that actively participate in the public processes associated with inland fisheries management decision-making.

The number and type of fishing waters, the mix of fish species, coupled with the large constituent base make management of the sport fisheries resource an interesting and challenging undertaking in all regions of the state. Added to this is the overlap of management responsibilities associated with other state and federal agencies. Those at the state level, especially the Department of Environmental Protection, Department of Transportation, Atlantic Salmon Commission and Land Use Regulatory Commission seem to have the most direct influence on some aspects of the IFM Program.

Many state fish and wildlife agencies across the country are finding or will discover shortly the losses of many of their management personnel due to retirements. Maine's IFM Section is poised to be in the same position. The average time on the job for biologists in the IFM Section is over 21 years. Many have 30 or more years of service.

Methodology

A four-tiered approach was used for conducting a comprehensive review of the IFM Section and its program. The tiers consisted of three phases for collecting data and one phase for developing recommendations:

Phase I: ***Scoping***
Phase II: ***Interviews***
Phase III: ***Examination of Documents***
Phase IV: ***Recommendations***

MAT coordinated a six-member review team: Three reviewers concentrated entirely on the biological aspects of fisheries management; and the other three reviewers concentrated on the organization development and related aspects of the program.

Analyzed data collected from the first three phases was triangulated for convergence of reoccurring themes, or congruencies, to identify the core areas for leveraging effectiveness of the fisheries program. These congruencies were then used to develop recommendations for improvement. It is important to note that without dealing first with these primary core areas, attempts to improve other areas would most likely resemble a band-aid approach, addressing symptoms rather than the root problems.

A guiding objective held by investigators during the data collection phases of the review was to look for areas that could be leveraged to improve the effectiveness of the program — areas of strength as well as areas of weakness.

An ***Internal Feedback Group*** composed of five IFM Section employees, widely respected by their peers as trustworthy and able to receive and pass on concerns from others, was used to mitigate influences of the rumor-mill and function as a conduit directly with MAT conducting the review. It provided valuable process feedback.

PHASE I: THE SCOPING PHASE

Phase I consisted of a preliminary review of agency documents (organizational charts, legislative mandates, mission and strategic plans) and a series of four approximately two-hour, facilitated focus groups.

The Scoping Phase was the initial process for narrowing down all the possibilities of things the review *could* examine to those of greatest importance for leveraging results. Incidentally, the scoping process helped to augment obtaining greater support from employees for the review itself. Such stakeholder support, or buy-in, is a critical factor for any organization undergoing a review and later attempting to implement improvements.

Focus Groups

Focus Group 1 was a heterogeneously composed group of twenty participants representing a stratified, randomly selected sample of all agency employees from each region and the headquarters office. The sample represented a vertical and horizontal cross-section of agency employees in terms of geographical location, management level and discipline, including fisheries management personnel.

Focus Group 2 was composed of twenty administrative staff or supervisor/managers from all levels across the agency, excluding fisheries.

Focus Group 3 was composed of fourteen participants representing external fisheries constituents, coming from both organized groups as well as individual IFM Section constituents.

Focus Group 4 was composed of five individuals from the IFM Section, five individuals from the Fish Hatcheries Section, the Fisheries Resource Planner, the Bureau Environmental Coordinator, a Fisheries Research Biologist, and the recently retired IFM Supervisor.

Each of the focus groups were asked the same following set of trigger questions and then asked to prioritize their responses:

- *What are we doing right in the IFM Section program? Why?*
- *What are we not doing very well in IFM?*
- *How can we address our weaknesses and leverage our strengths in IFM?*

Results of the focus groups produced the following seven areas of concern from which the interview questions were developed: *Funding and Staffing, Internal Communications, External Communications, Public Involvement, Politics/Administrative Support, Policy and Direction Setting, and Personnel Management.*

To protect the anonymity of the focus group participants as well as all other individuals who participated in the review, all reporting was done in group aggregate form.

PHASE II: INTERVIEWS

Interviews are generally most effective when conducted within a defined framework with a goal of determining core issues — in this case for the IFM Section. The seven key problem areas of concern affecting the IFM Section effectiveness that emerged from the Scoping Phase were, like many broad view studies of organizational performance, a profile of problems described in symptomatic terms. In Phase II, these six areas were confirmed, prioritized, and/or disconfirmed through direct personal interviews with biologists, administrators, Advisory Council members, and constituents of the IFM Section.

MAT's three fisheries experts visited regional offices, conducted interviews, examined documents, and met with groups of biologists to discuss biological programs and related issues. This information was later triangulated with data obtained by the other half of the MAT review team.

Focusing on organizational development issues, MAT conducted a total of 46, approximate 1½ to 2-hour structured, direct interviews using open-ended questions. Interviewed face-to-face were the Commissioner, Deputy Commissioner, all of the fisheries biologists and administrative staff in the IFM Section, and a sampling of IFM Section public constituents and cooperators. In addition, nine of the Advisory Council members were interviewed via telephone using the same set of interview questions.

Data Management

Dr. Gary Geroy, a professor of Human Capital and Economic Development at Colorado State University, performed a qualitative, cross-case analysis on the narrative responses collected from the open-ended questions of the interviews. Emergent themes and notions from each question were compared and areas of congruence and conflict recorded.

III. EXAMINATION OF DOCUMENTS

MAT reviewed the following documents:

- Legislative and informal mandates from legislature, Governor's Office, and/or the Commissioner
- Public Input Processes
- Department Mission Statement, Strategic Plan, and Operational Plans
- IFM Section's strategic, operational, species management plans
- Department Budget Documents (including process outline, Department budget with IFM Section's budget identified), and budget history relevant to any changes within the last 5 years.
- Department Organizational Charts

- Public Involvement Plan/Guide
- Public Involvement Survey Data
- Department Policies/Policy Manual
- IFM Policies/Policy Manual
- Employees Union Information
- Final reports from any previous Department reviews or evaluations.

IV. RECOMMENDATIONS

Results from analyzing data collected from (1) the focus groups, (2) the Review Team, and (3) informal discussions and examination of the documents were triangulated to identify common themes and to develop a number of leverage points for improving effectiveness on two levels: Within the current budget and within an increased budget.

Personnel Leadership

"One of the burdens of leadership is to be unpopular when necessary."

Current Status

One of the axioms of leadership is: "If you want to know how the leaders are doing, look at how the people are doing." The employees in the IFM Section are dedicated and committed to their jobs. They use good biological methodology and do excellent biological data collection with the resources available to them. However, despite these strong points, problems in other areas of the IFM Section's organizational development are evident.

Consideration is warranted in the area of the philosophy supporting operational paradigms. Among the fisheries biologists, we found the most prevalent paradigm for dealing with their publics to be the belief that *biology should drive all fisheries decisions and the job of a biologist is to give the public biological information until they come around to agreeing with the biologist's point of view.* This approach is too narrow and fails to consider all factors that influence decisions in a real world situation. See Decision Pentagon discussion in *Recommendation #1* of the *"Public Involvement"* section of this report, Page 24.

The problem of lack of direction for the IFM Section is discussed in *"Planning and Budgeting"* , Page 28, and the *"Decision Making Processes"* , Page 40. Setting and maintaining direction is an important role of leadership. The Division Director seems to do an acceptable job of using peer reviews for biological decisions and having set protocols for recommending regulation changes. However, this is a small part of the whole spectrum of what the IFM Section does. Section goals and priorities are unclear and regions set much of their own direction. In contrast, the Commissioner has set direction regarding IFM Section use of public involvement, use of work plans for accountability, etc; however, the implementation of the Commissioner's directives at the Division Director level can be characterized as grudging and halting in execution at best, nonexistent at worst.

Advisory Council members, Department administrators, several constituents and all IFM Section personnel were interviewed and asked if management and supervision of employees in the IFM Section was accomplished professionally and effectively. Fifty-eight percent (58%) of all those interviewed indicated that it was not accomplished professionally. Importantly, 62% of biologists and 80% of administrators felt this way. Reasons given for this perspective included: Some personnel issues have gone unresolved, the appearance that employees pursue personal missions as opposed to a shared Division mission, and that there is little or no accountability required of employees. Thirty-seven percent (37%) felt that

management and supervision were accomplished professionally and effectively, and cited as examples for their opinion: Personnel performance plans that were specific, including accountability factors, and a Division Director and Commissioner open door policy (People are encouraged to express concerns and are treated well).

The review also revealed that staff development training would help the IFM Section staff do a better job. An overwhelming 96% of interview respondents said more training was needed. The top five areas determined to be staff development priorities (in priority order) were:

1. Personnel management
2. Public relations
3. Data and statistical analysis (tied with #4
4. Computer training
5. Communications

The top three expected outcomes from this training were:

1. Improved public relations
2. Improved data gathering and analysis
3. Improved personnel management processes

The Maine Inland Fisheries Management Section is faced with the same problem that many state fish and wildlife agencies are facing. As the IFM Section and its Division move into the 21st century, they have numerous senior scientific staff eligible for retirement. The ensuing loss of institutional memory and loss of on-the-ground experience poses a serious future threat. This threat needs to be addressed now to prevent major problems in the future.

Discussion

The crux of much of the IFM Section's issues is a problem of administrative leadership, supervision and accountability. As with most problems, there are multiple reasons for their existence. Lack of clear and effective implementation of Commissioner directives in the IFM Section is leadership related and can be attributed to:

- Breakdown and/or blockage in information flow from the Commissioner to the Deputy Commissioner, to the Bureau Director, to the Division Director.

- Failure to hold the following personnel accountable: Deputy Commissioner, Bureau Director, Division Director, IFM Supervisor, and Regional IFM Biologists for communicating and implementing directives and direction set by the Commissioner.

- Adherence to a strong belief in chain-of-command by the Commissioner when direct intervention may be required.

Examples of breakdown and/or blockage in upper administration information flow are represented by those interviewed in their responses to the question: "*In you opinion, does the Inland Fisheries Management Section (or your region) receive or obtain pertinent information from upper Administration on priority issues, new initiatives, policy statements, etc., in a manner that's useful?* Sixty-nine percent (69%) of all respondents interviewed indicated "no". The Advisory Council respondents were the only sub-group that did not support this view, whereas, biologists, administration, and constituents supported this theme.

Leverage Areas

- Accountability of staff
- Chain-of-Command process
- Reward systems
- Performance development programs that include leadership and supervisory skills training

RECOMMENDATIONS ( means requires additional resources)

#1 Recommendation to Increase Personnel Leadership Effectiveness: Commissioner needs to hold the Deputy Commissioner responsible for communication and follow through with the Bureau Director regarding implementation of Commissioner policies and directives. Accountability performance indicators must align with this strategy.

Strategy Recommendation 1.1

Deputy Commissioner needs to hold the Bureau Director responsible for communication and follow-through with the Division Director regarding implementation of Commissioner policies and directives. Accountability performance indicators must align with this strategy.

Strategy Recommendation 1.2

Bureau Director needs to hold the Division Director responsible for communication and implementation of Commissioner policies and directives. Accountability performance indicators must align with this strategy.

Strategy Recommendation 1.3

Division Director needs to hold the IFM Supervisor responsible for his role in communication and implementation of Commissioner policies and directives. Accountability performance indicators must align with this strategy.

The culture of the IFM Section is close-knit. Most employees went to the same universities, took the same classes under the same professors, and have worked together an average of twenty-one years. This family-like culture has a number of advantages including making it easier to achieve high levels of interpersonal and organizational trust within the Section. This allows for a pleasant and productive work atmosphere and good performance as long as there are no performance problems. Typically, due to the high professional standards of the fisheries biologists and strong commitment of the employees, this culture is a good fit for the IFM Section. This type of work culture is very common among state fish and wildlife agencies in the United States.

However, one strong disadvantage becomes evident when a performance problem develops. The disadvantage of this type of culture is that it often makes it very difficult for those in supervisory positions to discipline individuals who perform poorly. This is exemplified in statements like, *"I can't do that to ....; "We have been friends for over twenty years."* Friendships are often so strong that protecting the friendship supersedes one's organizational management responsibilities. This is a difficult situation; however, in the Department, Division, and Section it has

contributed to a general failure of the system to hold people in the chain-of-command responsible. This is true from the Deputy Commissioner's level down to the IFM Supervisor's level. Accountability must be built into the chain-of-command system all the way down to the regional biologists by using effective coaching, training and individual performance evaluation processes.

#2 Recommendation to Increase Personnel Leadership Effectiveness:
Create a special assistant to the Commissioner with responsibility for managing transition of current senior biologists, and passing along both institutional memory and current best practices to the next generation of fisheries biologists in the IFM Section.

This should be a position with limited years of duration. Three years or less will be required to oversee the transition of most senior biologists. The voluntary retirement of senior biologists and consequential filling of those vacancies will open up positions for new biologists in the Division. It is imperative that institutional memory and current best practices be passed along to those new biologists. The task of overseeing this transition requires a person with historical knowledge of the Division, broad fisheries experience, and depth of knowledge of Division practices. Therefore, we recommend the current Division Director be assigned this important duty.

#3 Recommendation to Increase Personnel Leadership Effectiveness:
Institute a system of employee rewards which recognizes competencies and capabilities in supervision and management. (This includes both positive rewards and clearly not rewarding poor performance.)

An axiom of management is, "*You get what you reward.*" The Division's formal and informal reward system needs to be aligned to recognize excellence in leadership and supervisory skills and also to not reward poor supervisory performance. Positive rewards such as monetary rewards in state government are often restricted, but many creative types of positive recognition can be instituted. Examples include: Special assignments, travel approval to attend professional meetings, administrative leave (paid leave), recognition of performance in front of one's peers, a simple word of thanks, a personal note from the Commissioner, formal awards or certificates, etc.

#4 Recommendation to Increase Personnel Leadership Effectiveness:
Create a staff development program for all IFM Section personnel, including training on leadership and supervision skills for supervisory personnel.

Regarding leadership and supervision skills, the task of overcoming the reluctance to discipline a peer who is a friend is difficult at best. It becomes almost impossible if the supervisor has no training in how to evaluate or administer discipline. The goal is not to make the poorly performing employee feel bad, but to help them improve their performance.

Techniques for addressing these sensitive areas of supervisory responsibility should be provided to supervisory personnel through Department training opportunities. Sources for these may include the State Administrative Services or Human Resources segments of state government. In addition, the Management Assistance Team can serve as a resource for this type of training at no cost to the Department. Regardless of the sources, this type of training is highly recommended.

Communications: Internal and External

"Communication is the lubricant that makes it possible for organizations to work."

Current Status

Informal communications are alive and well in the IFM Section in day to day work life. Many years of working together and sharing a common "missionary like zeal" for the resource is manifested in healthy, high levels of trust within the fisheries biologists ranks. Communication is typically direct and honest.

However, in many of the discussions held during the Scoping Phase of the review communication weaknesses with other internal and external groups emerged as an underlying issue. Although this topic area was not included in the "Scope of Work" outlined in the legislative mandate calling for this review, it became apparent that "communications" was an issue that needed to be addressed. Communications issues fell into two areas—internal and external—and the results are presented below.

Internal Communications — In evaluating concerns related to IFM Section's internal communications, interviews showed that 76% overall of the IFM Section staff, Department administration and Advisory Council members felt that the IFM Section has made a reasonable effort to involve and integrate related Department units in planning and decision-making.

In general, the IFM Section staff feels they have good communication and good relationships with the Hatcheries Section and the other divisions in the Department, except perhaps for the Information and Education (I &E) Division. It is also generally agreed that there are two primary ways this communication occurs: 1) informal communication at the individual level, and 2) formal meetings with the other sections or divisions. A third means was through coordination efforts based on specific projects.

Informal personal communication efforts was also given as the reason why half (50% across all groups interviewed) felt that the difference in number, size and configuration of the five law enforcement regions versus the seven fisheries regions did not create confusion or communication difficulties in fish management fieldwork. However, others (46%) felt that these regional boundary differences contributed to communication inefficiencies and some public service inefficiency.

In assessing the effectiveness of communication from the upper administration to the IFM Section there was general agreement among those interviewed that the flow of information from top to bottom needs significant improvement. Among IFM Section biologists, the administration and constituents, 69% overall felt that

field biologists either don't receive information at all or do not receive it in an effective manner. Advisory Council members, as a sub-group, felt somewhat differently in that 44% felt that communications between the Administration and field biologists were effective.

Themes, or characterizations from those interviewed as to why communication processes were poor included:

1) that information in the field is obtained via rumors or other indirect methods,

2) that variation in fish management practices among regions results from regional biologists not getting enough information and direction from Augusta,

3) conflicts in personalities and philosophies at one level or another,

4) breakdowns or blockages in information flow from the administration down to the field,

5) lack of response to requests or inquiries going up the ladder,

6) regional fisheries staffs simply left out of the communications loop.

External Communications—The IFM Section's involvement in public outreach has been evolving over the last 20 years or so. The evolution is due to the realization that, as external publics become more engaged in public resource management issues, public understanding of and support for fisheries programs needs to be more consciously addressed. In recent years, actions have been taken to increase the Division's attention to outreach.

Seventy-nine percent (79%) of those interviewed believed that the fisheries staff in the Augusta office is currently involved in developing and disseminating information to the publics; however, that effort is viewed as being only somewhat effective. Individual requests to the Augusta fisheries staff for information are dealt with in a responsive and effective manner, while broad-based public outreach initiatives by the fisheries staff to increase public understanding of its programs rarely occur. It was generally recognized that the fisheries staff in the Augusta office that interacts regularly with the public consisted mainly of two people, the Division Director and the Division Secretary.

In the fisheries regions, it is very clear from interview data that regional personnel are involved in developing and disseminating information about their fisheries programs to interested publics. Ninety-one percent (91%) of those interviewed perceived this to be the case. Eighty-seven percent (87%) agreed that their regional efforts were effective. Primary outreach efforts include the weekly fishing

report (in newspapers and on website), a fisheries newsletter developed and disseminated in one region, TV news spots in areas where local stations occur, newspaper articles and contacts with newspaper reporters, public meetings, and one-on-one contacts with anglers. Fisheries biologists believe they are making a concerted effort to reach their publics. Those who felt these efforts could be more effective suggested that communications skills needed to be improved or refined, that some biologists' personal views needed to be more tempered in public outreach efforts, and that outreach efforts needed to be more sensitive to the broader interests or needs of the public.

Perceptions of the Department I & E Division's role in developing and disseminating information about inland fisheries management programs and issues were also explored. While it was generally felt that I &E Division efforts had improved over the last several years, ninety-one percent (91%) of those interviewed agreed that the I & E Division could be more effective. One example of what is perceived to be lack of responsiveness from the I & E Division is the time it has taken to produce the 3x4 inch green card about illegal introductions of fish. Biologists expected to have supplies of these cards to use as handouts during ice fishing season in the winter of 2001-02 and still do not have them.

Two predominate themes emerged from the interviews as to how I &E Division involvement in the IFM Section outreach could be improved:

1) I &E Division staff should get out into the regions more and see what is going on, and

2) Develop a structured communications system between the I &E Division, the Fisheries Division staff in Augusta, and the regions.

Other ideas included: optimizing the website, securing more TV coverage, and improving fisheries program coverage in the Department magazine.

Also, a concern was raised about communication with volunteer anglers who participate in the harvest and angling-effort survey program. Although it is generally felt that this is an important program and that the volunteers need to be nurtured, 50% of the respondents felt that volunteers do not get much if any feedback on their effort. It appears that less than half of the regions follow-though with reports back to these volunteers on how their information was used or how it is related to fish management on the waters involved. Reasons for this in the regions varied from lack of time to importance of the species involved to lack of user-friendly data coming out of the SAS information system.

The primary suggestion for improvement was to develop a standardized report format. Such a format would be all-inclusive, published, posted on the website, and mailed to the individual program participants. Other suggestions from the interviews included making it a policy for each region to give feedback annually

to program participants as well as adopting the Gray regional office model of sending out a newsletter with this information.

As a result of focus group discussions, an additional related area was investigated. This was the concept of "customer service" relative to the IFM Section. Two strong themes emerged when respondents were asked to describe their perspective on the philosophy of the IFM Section toward customer service: 1) across all groups, 50% of respondents indicated the IFM Section's philosophy was to provide for the needs of the angling public as the customer, and 2) 30% indicated that "resource protection" was the IFM Section's guiding principle and did not go on to identify a customer service philosophy. A third theme, satisfying customer needs while providing for the welfare of the resource, was supported by only 14% of respondents.

Discussion

It is clear that both internal and external communications problems are well founded and have significant impact on how effectively business is conducted inside and outside the Department. Internally, the review found that important information simply does not get from the Commissioner's Office to the regional fisheries staff in a timely, clear and meaningful manner. A good example is the way in which the notice and review of the draft "Administrative Policy Related to Fisheries Management" was handled up and down the ladder. Another, timely example is the manner in which the Bureau and/or the Division are handling plans to fill the vacant fish management supervisor position. Fisheries management staff indicate they do not know what's going on, yet filling this position is an key issue to everyone in the Division and Administration. The Commissioner has given instructions to fill this important position. Some actions have been taken to do so. There is significant interest within the IFM Section regarding this position, yet weeks are elapsing with no evident progress or information sharing about the status of the process.

Likewise, there is evidence to indicate that when inquiries and/or requests for information are made up the chain of command from the field, the perception of some field staff is that there is little or no follow-though. Additionally, although for the most part the IFM Section field personnel appear to communicate acceptably among themselves and inter-divisional communication in the field is satisfactory, they would prefer more regular, consciously structured communication and coordination efforts with Augusta based administrators and Divisions.

Regarding public outreach and/or public relations, improvements are needed to insure that timely and important information is clearly communicated to the many publics interested in IFM Section programs and issues on a regular basis. Of particular note is the IFM Section's lack of clarity on what its approach to customer service is. In this arena, the variability found among the fisheries staff when interviewed, and the perceptions of those outside the IFM Section,

indicates that there is no clear philosophy, direction, training, or other guidance on what the staffs' role and responsibility should be regarding customer service. Clear and unified direction on this matter is needed. Other issues related to external communications efforts are discussed under the "*Public Involvement*" category. Page 22.

Leverage Areas

- The IFM Supervisor position —This is a key position through which a number of communication issues inside and outside the IFM Section, Division and Department can be addressed.

- The roles and responsibilities of the Division Director and the IFM Supervisor, and their relationship to each other — Improved definition of roles and expectations will set the stage for improvement in external and internal communications, especially to the field staff.

- Divisional policies and guidelines for conducting business — Clear policy and direction setting is crucial to obtaining consistency, appropriate implementation of management strategies, and hence to enhanced credibility internally and externally.

- Self-identification of internal communications as a problem — Better execution and more clear, two-way information sharing can avoid and/or minimize internal management difficulties.

- Recognition that public outreach and public support are important — Public support can come from an effective outreach effort.

Recommendations

#1 Recommendation to Improve Communications: Hire an effective leader/supervisor/manager to fill the IFM Supervisor position.

All interviews with the Department's administration, the Division's Augusta staff and the IFM Section's fisheries biologists indicated that the previous situation involving the IFM Supervisor, and the fact that the position was located in Bangor instead of the Augusta headquarters office, contributed to three key problems:

1) ineffective communications process,

2) lack of effective supervision and leadership, and

3) a general lack of accountability in the IFM Section.

The decision to move this position to the Augusta office is a good one. It must be followed with an effective selection process for the new IFM Supervisor, beginning with the knowledge, skills and abilities required for this position in the job announcement and continuing with the selection criteria used in the interview process. Technical fisheries science abilities are of secondary importance for the tasks currently at hand.

#2 Recommendation to Improve Communications: Clarify and define the roles and responsibilities of the Division Director and the IFM Supervisor and their relationship to each other.

The situation with the previous IFM Supervisor required the Division Director to spend considerable time handling communications with and management of the field staff. This situation should be remedied with the selection of an effective communicator and manager for the Supervisor position.

To prevent ambiguity in the area where internal and external communications is concerned, it is important to clarify the roles and responsibilities of these two positions. This step will help clarify expectations and improve accountability. Differential duties and responsibilities should be clearly outlined in and monitored through employee performance evaluations.

Again, to be effective, the suggested approach is to have the Division Director focus upward and outward, working with the administration and the public on inland fisheries management concerns. The IFM Supervisor would focus at the IFM Section level, conferring with the Division Director and communicating regularly with the regional fisheries biologists. Likewise, the regional biologists should then be given clear guidance about keeping regional staff members informed and involved with the Division.

#3 Recommendation to Improve Communications: Clarify Divisional policies or guidelines related to communications and outreach.

Clear policy and direction setting is crucial to obtaining consistency and appropriate implementation of management strategies in all aspects of the division's work, including communications and outreach efforts. A clear statement about the Division and IFM Section's approach to customer service can be a starting point. This should be developed in a participative manner involving all

Division employees. "*People support what they help to build*" is a principle necessary for obtaining critical buy-in from those employees whose work will be affected by the newly clarified philosophy.

Also, as plans are written for both internal communications procedures and for an external communications program (see recommendations that follow), clear guidance must be included in the form of policy/guidelines. Responsibilities and expectations for all staff members implementing the plans need to be explicit. These responsibilities should then be monitored via employee performance appraisals. [Please see the "*Decision Making Processes*" Section for more on policy development and compliance, Page 40.

#4 Recommendation to Improve Communications: Develop and diligently implement an internal Fisheries and Hatcheries Division communications strategy which includes written as well as other formats.

The breakdown in information flow and direction setting related to the IFM Section can best be addressed via a conscious plan to improve. Employees need to understand their role in the communications web, where to look for particularly important communications, and what is expected of them. A Division communications plan should be implemented that includes the Commissioner's Office, the Bureau of Resource Management, the Division and IFM Section Augusta staff, and regional fisheries offices.

Again, such a plan should be developed using a highly participative approach so that all those affected by the effort have their needs addressed. A good communications plan equips people to send and receive information efficiently and accurately. A written strategy should include elements that:

- Maximize use of available communication technology, such as e-mail and voice mail;
- Establish protocols for distributing communications, abide by them and enforce them;
- Call for prompt and timely dissemination of information;
- Give thorough consideration to identification of which people or which positions (Department-wide) are included in the communications network for various issues;
- Provide for thorough communication of decisions, changes in policy or direction, and other important actions by providing context, reasons, and ramifications—not only does this help employees understand decisions, but it helps them explain decisions to the public;

- Provide a structure or mechanism for staff at all levels to adequately and effectively share concerns, identify problems, and develop solutions; and

- Provide information, and/or training, on how to conduct effective meetings — so that good communication precedes, occurs at, and follows them.

#5 Recommendation to Improve Communications: Fisheries and I & E Divisions collaborate to develop and implement a public outreach plan for the Fisheries Division and IFM Section.

By working directly with the I & E Division to develop an outreach and networking plan, the Fisheries Division and IFM Section can successfully improve public understanding and support for the various aspects of the Inland Fisheries Management Program. Again, recommended is a collaborative planning process involving representation from those expected to implement the plan in whole or part.

Sub-points to consider in the development of an outreach plan are:

- It is clear that the I & E Division needs to give more attention to inland fisheries activities in the field, especially by observing and/or participating in such themselves, and by taking the lead role in the overall outreach effort.

- There is concern that freelance writers now being used to write magazine articles are too removed from fisheries field work to understand it or write about it in a manner that reflects the Division or IFM Section's interests or concerns and/or depth of issues.

- During Phase I and II of the review, an issue was raised about the effectiveness of the Department magazine in conveying important messages about inland fish management to the numerous publics that the IFM Section and Division would like to impact.

Given these points, the following recommendations are also made:

- As a part of the recommended communications planning process, the I &E Division with others from administration should consider an assessment of the Department magazine's effectiveness. Given the evolving nature of user groups in Maine, as in the rest of the country, the Department may want to consider a publication that reaches a larger, broader audience — such as a color quarterly newspaper insert or other more widely distributed periodic publication. It may be time that the Department transition from a magazine to another more effective publication format.

- Given the time constraints and workloads of the fisheries biologists, it appears unwise to use them as writers for popular articles. Unless some other avenue is found, out-sourcing this function is an acceptable approach; although, the oversight provided to contractors needs attention.

  Again, to be effective in garnering public understanding and support, the articles written (for whatever format) need to be timely and on target regarding current inland fisheries management activities, challenges and issues. Using contract writers who will travel to, observe, and participate in field activities is preferable.

- Likewise, as a part of the communications plan, I & E Division personnel should travel to, observe, and participate in field activities — to photograph and write stories about them. To facilitate developing a closer connection between I & E Division staff and the IFM Section, as part of the plan they should call periodic meetings in which together they coordinate participation in field activities.

#6 Recommendation to Improve Communications: Align outlying Law Enforcement Sergeant Section boundaries with the boundaries of the Fisheries/Wildlife Management Regions.

Internal communications and public service efforts can be improved at no cost and with minimal disturbance by re-districting the boundaries of the Sergeant Sections in the Law Enforcement Divisions to align with the boundaries of the current administrative regions for the IFM Section and the Wildlife Management Section. It is not realistic to hope that the Department can revert to having seven (7) Law Enforcement Divisions that exactly overlay the resource management regions, hence it is suggested that alignment be accomplished at the Sergeant Section level. This will enhance exchange of information between resource managers and wardens. It will also make it easier to direct public inquiries and requests for assistance to the right person because it will make it easier to determine who is responsible for any given geographic area.

Public Involvement

You either do public involvement in the beginning or you get it in the end!
Anonymous

Current Status

Involving the public, especially via working groups, in the strategic planning process is laudable. Also, the participation of fisheries and administrative staff in numerous public forums around the state has helped gather public input mostly in a non-confrontational manner. One-on-one contact in the field between fisheries staff and anglers is also a golden opportunity to get input and provide information on a one-on-one basis. This opportunity is being used well in most cases. However, in some cases open displays of arrogance, or intolerance for angler ideas, have been detrimental to fisheries program support.

The Legislature has mandated a regulation setting process that includes certain public hearing processes that the Division must follow. A strategic planning process once every fifteen years and a dozen or so open public forums annually added to this are not enough for effective public involvement. When considering the additional hearing process for making regulation changes and the one-on-one contacts between fisheries staff and the angling public, some major gaps are evident in the public involvement philosophy, commitment, and processes used by the Division.

Discussion

Responses from those interviewed showed varied and different views within the Department and the IFM Section as to what public involvement means and how it should be accomplished. However, in practice, the Division and the IFM Section appear to rely almost exclusively on regulation hearings and one-on-one angler contacts as their public involvement process – this is *too* limited an approach.

When asked to describe the philosophy of the IFM Section toward *customer service* three themes emerged with an obvious polarity. The overarching theme was "*The needs of the public as the customer are our priority*" with 50% of the responses aligning under this theme. However, this theme was not supported by the constituent segment interviewed. The second strongest theme was *"resource protection"* with 30% of the interview responses supporting this concept. *"Biologically optimal quality fisheries"* was the third theme with 14% of the interview responses.

Public participation is not "convincing the public to think like we do". Nor is it giving up one's management responsibility as a professional biologist nor abdicating management decisions in favor of a vote. A majority of the fisheries biologists believe the public must be served. They also share a relatively limited view of just who IFM Section publics really are. The Review Team suggests they broaden their view of who their constituents are.

Also, there seems to be a strong belief that if "the biology" is explained correctly or long enough, then "people will agree with us". Nationally recognized authority on citizen participation, Hans Bleiker, eloquently describes this belief as the "*Technical Fallacy : the notion that rigorous technical analysis of complex problems where the solutions affect diverse publics with different values leads to agreement.*" These misconceptions of what public involvement is can be corrected by providing adequate employee training in public participation theories, skills, and experiences. But, unless it is instilled within the culture, training alone is ineffective.

There is a distinct difference of opinion regarding the IFM Section's use of processes that effectively identify public concerns before they become issues. Overall, 64% of those interviewed indicated that such an effective process does exist. However, this perspective is not universally held across categories of those interviewed: Advisory Group —— decidedly "no"; Biologists — decidedly "yes"; Administration — split; and Constituents — decidedly "no".

The current disconnect between the Sportsman's Alliance of Maine (SAM) and the IFM Section is a rift that is exacerbated by the lack of a more rigorous public involvement process. In recent years the situation has continued to worsen. A lack of leadership at the Division level to establish a common philosophy, commitment, and approach to public involvement has contributed. In fact, to address this issue, the Commissioner has mandated a more active public involvement effort within the Division.

This rift needs to be repaired through cooperative efforts between SAM and the IFM Section. It is time for both parties to work in concert in the interest of the fisheries resources of the state.

Leverage Areas

- Widely shared Department and Division philosophy and rationale on effective public involvement.
- Data collection on public attitudes, preferences.
- Knowledge and skills in successful public participation strategies and approaches.

- Reward systems that align employee public involvement behaviors with Department/Division philosophy.

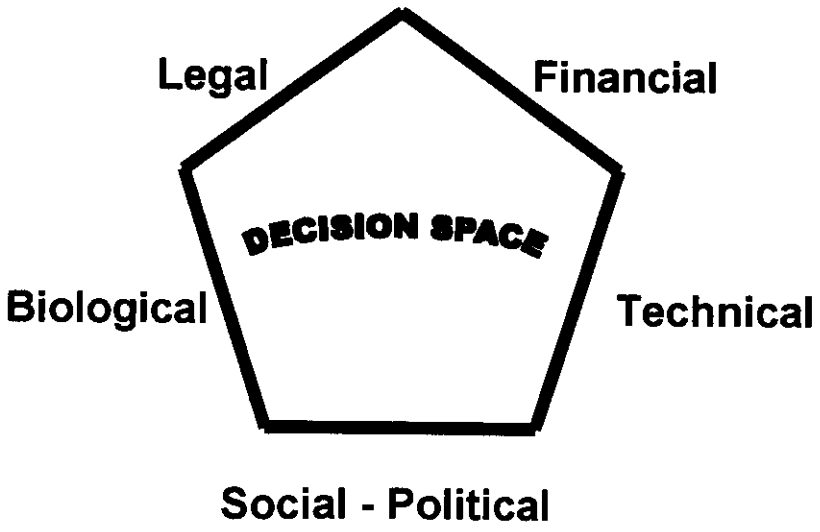
RECOMMENDATIONS ( means requires additional resources)

#1 Recommendation to Increase Public Involvement Effectiveness:
Establish and promote a written Department/Division philosophy about what public involvement is and what it represents, as well as how it "fits" into the biological management of natural resources.

MAT suggests a philosophy similar to that represented by the decision space pentagon illustrated below.

Effective public fish and wildlife agencies make decisions involving five critical considerations. This five-sided decision space can be thought of as a decision pentagon. The space is first bounded by legal boundaries (Does the agency have the authority for doing this? Is it constitutional? Does it meet National Environmental Policy Act regulations [NEPA], etc.?)

The second boundary is the biological boundary (maximum sustained yield, minimum viable population, etc.). The third boundary is the technical boundary (We can't use a 5 lb. radio collar on a hummingbird). The fourth boundary is the financial boundary (Can we afford it, etc.?). The fifth boundary is the socio-political boundary (Is this acceptable to our publics, etc.?)



Most biologists understand the biological, technical, financial and legal constraints of decisions. But often they wish socio-political boundaries didn't exist. People generally want to emphasize the boundary that is closest to their area of expertise (financial for accountants, biological for biologists, legal for lawyers).

Socio-political boundaries are just as hard and binding as biological boundaries. Again, this doesn't mean that biologists or other professionals should abdicate their professional responsibilities.

Instead, it is the professional's responsibility to make sure that all publics know and understand the other four boundaries so that the public can make informed choices about setting the socio-political boundary. The fish and wildlife agency professional must not succumb to setting the socio-political boundary for their publics. The professional must make sure the publics and other agency personnel understand the separate roles of the publics and the professionals in establishing the decision space. Citizen participation is the process used by agency professionals to insure that publics have an opportunity to be informed, express their concerns and recommendations, and participate in the decision-making processes effecting management of public resources.

Strategy Recommendation 1.1

Commissioner and Division Director jointly promote a common public participation definition and philosophy.

The Commissioner has attempted to promote a public participation approach through policy development and use of the chain of command to get compliance from the Division. Communication seems to stop at the Division Director's level and complaints of "I didn't know", or "I wasn't involved" are heard.
See "*Communications: Internal and External*" recommendations for strategies to remedy this, Page 13.

Strategy Recommendation 1.2

Provide training for all staff in Division administration and the IFM Section on public involvement philosophy, approaches, and techniques.

While a number of the fisheries staff have been exposed to training in public participation with such groups as Hans and Annemarie Bleiker's Citizen Participation workshop, a one-time training is not sufficient for development of a repertoire of successful techniques and approaches. Providing training on this topic not only offers skills for successful public involvement but also provides an

opportunity for the Commissioner, Deputy Commissioner, Bureau Director, Division Director, etc., to promulgate the Department philosophy of public involvement. Noel Tichy, author of *The Leadership Engine*, extols the virtues of organizational leaders such as Jack Welch, former CEO of General Electric, who spent large portions of his time training employees to achieve organizational ends. Tichy goes on to state, *"Leadership is the capacity to get things done through others by changing people's mindsets and energizing them to action. Successful leadership must accomplish this through ideas and values, not through coercion or Machiavellian manipulation."* Establishing and ingraining a philosophy of public participation is integral to the Department, Division, and IFM Section future management success.

#2 Recommendation to Increase Public Involvement Effectiveness:
Add rigorous methods to gather human dimensions data (public attitudes, preferences and desires).

Public forums, one-on-one contacts, citizen working groups, and regulation hearings are good efforts as far as they go. However, information collected from constituent participation in forums, working groups, public hearings, etc., is not statistically defensible. The opportunity for "packing the court" always exists. Advisory Council members often have to question if testimony heard in one of these forums is truly representative of what the majority of constituents think. The Department currently conducts a public survey using mailed questionnaires to a random sample of Maine's citizens about once every five years through the University of Maine. In the last three years I & E Division has contracted telephone surveys of the general public for Department-wide information. This is an excellent effort at the agency level. These telephone surveys include some questions about fisheries but not at the level of detail needed to make informed and specific fisheries management decisions.

Effective public participation, like effective biology, must use defensible and statistically valid methods of collecting information where practical. Representative samples of publics randomly drawn provide valid sampling methodology. In addition, the technique of mail or telephone survey allows for significant sample sizes to establish credible public attitude data. Contracting with organizations like Responsive Management, Southwick Associates, or Universities with Human Dimensions programs such as Cornell or Colorado State are examples of sources for collecting this type of data. Effectively run telephone surveys can provide quick turnaround of data in special cases as was illustrated several years ago when Wyoming Game and Fish conducted a telephone survey on an issue for their legislature in a week's time.

#3 Recommendation to Increase Public Involvement Effectiveness:
Establish employee rewards for public involvement.

The axiom in management is *"You get what you reward!"* There are no specific rewards for good public involvement practices in the Maine IFM Section. Establishment of such a reward system is critical to achieving alignment between fisheries employee public involvement practices and Department direction on this subject. In the review, instances of fisheries biologists doing good public involvement were described; however, no one indicated that any recognition has been made of these efforts by the Division. Similarly, in instances where public involvement was done poorly, no consequences to the offending employee(s) were known to have occurred.

Planning and Budgeting

Planning without action is only good intentions.

—Anonymous

Current Status

Currently there is a very active planning effort in the IFM Section. The Section's planner has done considerable work heading up the effort to develop the next fifteen-year strategic plan. Notable are the efforts at public involvement, which principally involved work groups composed of representatives from a cross section of publics. It is an excellent component of the planning process and shows good use of this one public involvement technique.

General goals and strategy development are in the final stages of completion, and hope is expressed by many within the IFM Section that this strategic plan will be a benefit, helping with current controversies, e.g., the Sportsmen's Alliance of Maine (SAM) dissatisfaction on some issues.

Efforts have been made to write statewide goals, strategies, and objectives in terms, which the general public understands and to which they can relate. This seems to be an improvement over the last strategic planning effort fifteen years ago. However, fisheries constituents relate most to what is happening on their favorite bodies of water. While necessary planning tools, statewide goals reflecting statewide catch rates, etc., have a limited reality for constituents.

The current draft strategic plan was developed from the top down. Statewide goals for each species of fish were developed first. At this point in the process the Section has not yet stepped down the plan to apply it to each region's species management practices or annual work plans. We strongly encourage this step because it is the only way to have the strategic plan implemented at the level where the fieldwork is done. Currently, it is unclear how or if the strategic plan will be successfully tied to the Division's budget, but using work plans that include a requested budget can be an effective vehicle for making this connection.

At present in each region annual work plans consist of developing a list of waters that the biologists intend to work on during the following year along with what work is to be done on each body of water. This list of waters and associated work is then discussed by each regional biologist with the Division Director and IFM Supervisor and approved by the Division Director. These work plans may also include other important fisheries work such as public participation efforts, etc.

Regional fisheries biologists have no information about budget. There essentially is no regional budget. Budget expenditures are all a "black box" of unknown

information with the Division Director holding the key. One biologist stated, "*I have no idea if we spend $50,000 per year or $500,000 per year.*" The fisheries budget is developed annually at the Division level by the Division Director and seems to be based upon the old adage common to state government *of "You get what you got last year with a percentage adjustment for inflation".* This is understandable given the state financial situation and it's essentially flat budget levels over the last number of years. However, even with flat budgets, there should be projects planned with specific time periods (five-year projects, two-year projects, etc.). These projects eventually end and dollars and staff time are then freed up for redirection. Without work plans, this redirection is left to the Division Director to do as he decides.

Discussion

The Management Assistance Team's experience with state fish and wildlife agencies' strategic plans is that many often end up as a document that fails to be implemented in the agency's day-to-day work. Several of those interviewed expressed the opinion that this was the fate of the last fifteen-year strategic plan in the Fisheries Division. The key to stepping down the new statewide goals and objectives to a meaningful level is in development of regional work plans.

A prototype work plan is being developed for lake trout, which is an appropriate way to begin. The draft concept plan for integrating species plans into regional work plans is a good overview of how regional work plans might be "rolled up" to meet statewide objectives, but this concept plan is not sufficient for a work plan. The concept plan must be followed up by instituting a process for development of annual work plans within each region. It is critical that a final annual work plan development process be put in place to include *all* work done by the IFM Section. These work plans should include at a minimum:

1. Project Name
2. Person responsible for the project
3. Number of staff and amount of time each is to work on the project
4. Project schedule showing specific tasks to be accomplished during the budget year with completion dates for each task
5. Cost of the project
6. Measurable results/benefits expected from completion of the project (project objectives and outcomes)
7. How the project's completion will help meet goal(s) or objective(s) of the strategic plan.

Only with this type of work plan is it possible to make a direct tie between the actual work to be done in the field with the overall statewide direction, goals and objectives set forth with constituents in the development of the strategic plan. This approach also allows for quarterly, semi-annual, and/or annual evaluation of what was actually accomplished against what was planned and budgeted. This

accountability should then be reflected in each employee's annual performance appraisal. Currently, neither this level of work planning, budgeting, nor accountability is in operation within the IFM Section.

A proper work plan process also provides ultimate accountability at the Division and Department levels when tying accomplishments to budget expenditures. When asked where the money goes and what was accomplished, it is easily answered if a good work plan process is in place. In addition, state agencies are often asked to explain the impacts of potential budget cuts or possible budget increases. Legislative bodies rightly ask questions of this nature in order to understand what the public will get for budget increases or what will be lost if budget cuts are made. Without a budget and planning process like the one described here, the Department and Division can only relate impacts of budget cuts or increases in the most nebulous and general terms.

Annual work plans should be the basis for development of the Division budget. Work plans should be submitted to fund existing work with each budget cycle. Any plans for new work can be submitted at this same time in case funds are available for redirection or should additional funds be allocated to the Division. The criteria for selection of new project work plans should be developed based upon management priorities established in the strategic plan. Without having work plans, the budget process, and the strategic planning process tied together, the Department and Division can only hope for the best from year to year. In the absence of such alignment there is no assurance of achieving strategic goals and objectives.

The current fiscal management process in the Division has a number of serious disadvantages. First, regional biologists have no idea how much money they have to operate the region and are unable to plan for contingencies or handle unexpected needs. Any purchases, etc., are done on a "*Please, Mr. Director, may I have...*" basis. This makes the regional staff totally dependent upon the Division Director and does nothing to develop their budget management skills for professional advancement within the agency. This system of budget management creates a benevolent dictator of sorts. Regional biologists are totally dependent upon him. Although there is great regard for the Division Director, liking him does not enable regional biologists to function fully in managing all aspects of a complete regional fisheries program.

Leverage Areas

- Strong support from Division Director level up through Commissioner level for the strategic planning and work plan process, and commitment to accountability for its implementation.

- Public involvement at the regional level to develop regional objectives.

- Implementation of a system of annual work plans developed by the regions that describe what will be done by when and at what costs in time and dollars, and description as to how the work relates to goals, objectives and strategies of the Department's/ Division's planned strategic direction.

- Training for regional supervisory biologists on budget development and management utilizing an annual work plan process.

RECOMMENDATIONS

#1 Recommendation to Increase Planning and Budget Effectiveness: Division Director and other administrative staff express and demonstrate strong support for an annual work plan process that includes all work done in the IFM Section and ties to overall strategic direction.

Critical to success of work plan implementation or any other management change of this magnitude is a strong show of support from the Division Director and administrators above that level. If field staff, who are responsible for implementing work plans, believe that upper management is not serious about the implementation or is "just going through the motions", then little real and lasting implementation is likely to take place.

Demonstration of strong support should occur through multiple actions, which should include but not be limited to:

1. Speaking out in support of the work plans process at every opportunity;

2. Honoring and/or rewarding those who work toward implementation of work plans and counseling those who stall or otherwise inhibit implementation of work plans;

3. Written documents, letters, memos, e-mails, informal notes and other written forms expressing support;

4. Providing clear written direction and examples for developing annual work plans.

#2 Recommendation to Increase Planning and Budget Effectiveness:
Establish a system of annual work plans that covers all work done in the Division and ties back to overall strategic direction.

Strategy Recommendation 2.1

Have the IFM Section planner work with regional fisheries staff to develop the final format for annual work plans and coordinate all work plans with the next budget cycle after the strategic plan is completed.

Including field staff in the development of work plans applies the principle, *"People tend to support what they help build."* The use of work plans must not be an option. Funding and staff time should only be budgeted for work that has been included in work plans.

Budget and staff time have already been committed for this fiscal year; thus, work plan development should take place in order to build the regional, Section, and Division budget requests for the next fiscal cycle. Timing is important because budgets are only developed once per year and it is important to not miss this opportunity.

The Division could serve as a model for other divisions in the Department if they are not already on a similar program of planning and budgeting as recommended here for fisheries.

#3 Recommendation to Increase Planning and Budget Effectiveness:
Involve publics within each region in development of regional objectives that address the overall statewide goals/objectives and apply them to specific regional waters.

In order to step down statewide goals, objectives, and implement statewide strategies, each region must develop it's own strategies and objectives of how much it can accomplish in the statewide plan. This is where the "rubber meets the road" and is the level where constituents can connect with what will actually happen in their area and with "their" waters as a result of implementing the strategic plan.

Public involvement in setting regional objectives and strategies at this level is important to success. Otherwise, the Division may choose strategies and objectives that their publics do not support even though those same publics may have had a representative on a work group at the statewide level. It is not

recommended that publics be involved in actual development of annual regional work plans. These are the responsibility of the Section. However, work plans should be driven by objectives and strategies developed at the regional level with public input.

Implementation of the strategic plan by relying only on the legally mandated public hearing process when making rule changes or fish stocking changes is not recommended. This approach could lead to surprised and angry publics expressing disagreement with specific regional strategies and/or actions, even though they may tie to the overall state goals and objectives, etc. Constituents relate most to what will happen in their regions rather than to some agreed upon statewide goals and objectives.

#4 Recommendation to Increase Planning and Budget Effectiveness:
Train regional fisheries staff to develop regional budgets based upon annual work plans.

Budget development training can be done at no cost by using in-house Administrative Services Division staff and the fisheries planner to conduct training for the regional biologists. While some regional biologists may have budgeting skills, the current system of budgeting in the Division has done nothing to help the regional biologists understand or improve their skills regarding the budget process required by the Department and the state accounting system. The most important part of this training is developing a budget format for submitting regional project budget requests and helping regional biologists learn how to estimate time and dollar requirements for planned projects.

Staffing and Funding Levels

"If we don't change our direction, we're likely to end up where we're headed."
-- Chinese proverb

Current Status

The IFM Section has a cadre of employees that are dedicated professionals who are trying hard to protect Maine's fisheries resources and provide quality and sustainable fishing opportunities. When assessing the numbers of waters and myriad of duties necessary to manage the inland fisheries of Maine, it is obvious that the Section is understaffed and inadequately funded. For example, illustrations of understaffing found are as follows:

- Some regional biologists are serving as staff for statewide programs (e.g., species experts, equipment purchasing,) and these responsibilities reduce the time available for implementing fisheries management programs.

- One of Maine's seven regions, Region C, is approximately 80% the size of Connecticut. Region C has only three biologists to manage all fisheries in that region; Connecticut has over 25 state fisheries biologists.

- Fisheries personnel expressed a general level of frustration over the fact that they have major management responsibilities and increasing workloads without adequate staffing. Primarily their frustrations were about their inability to get data on many bodies of water except once every several years (at best) and over their inability to study numerous waters. Forty-two percent (42%) of interview respondents indicated these as their top concerns regarding lack of funding and staff.

- Personal interviews conducted with fisheries staff, Advisory Council members, constituents, and administrators revealed that ninety-one percent (91%) of the respondents said there is a need for more funding and staffing.

Discussion

The current understaffing situation will soon be exacerbated by retirements and loss of institutional memory. The average length of employment for current fisheries management staff is 21.6 years. Six of the current fisheries biologists have been employed at the IFM Section for over 30 years.

In addition, a number of fisheries biologists expressed frustration over the length of time it seemed to take to fill IFM Section positions that were vacant due to retirements, transfers, etc. The perception was that other divisions within the Department were able to fill positions much more quickly and that fisheries was being "ignored."

In reality, it should take no longer to fill fisheries positions than any other division. The causes for this perception appear to be two-fold: 1) Recently some fisheries positions have been held open until the results of this review became available so that less disruption would occur if reorganizing of certain positions was recommended, and 2) Vacancy savings. Perhaps a larger factor is the failure of the Division Director to communicate to the field why positions have not been put forward to the Commissioner's office for filling or the failure to communicate sufficiently between the Director and the Commissioner's office.

Prioritization of work and allocation of resources (money and manpower) in a manner that reflects priorities and strategies are critical areas of management. This is especially critical when the resources of money and manpower are very limited as is currently the case with the Department. Eighty five percent (85%) of the interview respondents indicated that they believed work is prioritized and that resource allocation aligns with those priorities.

Four perspectives on how work is prioritized emerge from the data.

1. The most common theme is "formal meetings." Twenty-nine percent (29%) of the respondents support this theme.

2. The second most common theme is that work priority is driven by upper administrative mandate/directive. Twenty-three percent (23%) of the respondents support this theme.

3. The third most common theme is that work priority is driven by individual informal preference. This theme is supported by sixteen percent (16%) of the respondents.

4. The fourth ranked theme was that "public usage and requests" drove priorities.

Management Assistance Team observations and conclusions are that *regional* priorities currently are developed reasonably well and followed in each region. However, when biologists were asked to name the Division's priority areas of work, responses were "all over the map" with twenty-one different priorities named by 26 biologists interviewed (including the Director). This indicates no clear *statewide* priorities. See "Discussion" sections in "*Decision Making Processes* ", Page 40 and "Recommendations" in *"Planning and Budgeting"*, Page 28.

Leverage Areas

- Public support – As a public agency managing publicly owned fisheries resources, the IFM Section needs to garner support from its publics for increased funding and staffing levels. Legislative support will follow if a groundswell of public support is generated.

- Increased communication between the Division Director and the Commissioner's office about submission of vacant fisheries positions for filling, and communication between the Division Director and the field about the status of unfilled positions and rational.

- Prioritizing work and allocating money and manpower based upon those priorities – While 85% of fisheries employees believe that their work is prioritized and resources allocated accordingly, improvements in the way this is done will yield greater targeted use of existing resources. See "*Planning and Budgeting*", Page 28.

RECOMMENDATIONS ($  means requires additional resources)

#1 Recommendation to Increase Staffing and Funding Effectiveness:
Pursue multiple avenues for increasing funding and staffing for the IFM Section.

Improving funding and staffing levels in the current economic climate within Maine's state government will be challenging to say the least. However, this does not diminish the importance of doing it. Personal interviews of constituents, fisheries staff, administrators, and Advisory Council members revealed two primary themes and three secondary themes on how to improve funding and staffing.

1. The overwhelming theme was "total stakeholder involvement in the budget process" with 41% of respondents indicating this was an important step to increasing funding and staffing levels.

2. The second and still strongly supported theme was "larger general fund allocation" with 21% of respondents indicating this as a leverage area.

The three secondary themes were:

- "Use project based funding" (10%),
- "Develop and implement grant seeking and partnership strategies" (7%)
- "Set the hiring of biologists as a state priority" (7%).

The basis for any of these avenues becoming successful will be the general publics of Maine becoming more aware of the significant understaffing and lack of funds for the IFM Section, and the resulting impacts on the state's inland fisheries resources. Once the problem is recognized, then support must be garnered from a majority of publics for fixing the problem. Once this stage is reached, avenues can be pursued such as a greater share of the state's general tax funds, a percentage of the state sales tax, or lottery monies, etc.

#2 Recommendation to Increase Staffing and Funding Effectiveness: Develop detailed justifications and prioritize IFM Section staffing needs with the goal of adding, at least one, new, full-time fisheries biologist position to each region over the next two years. The duties of these positions should be to work primarily on habitat protection (including riparian areas) and exotic species issues.

AND...

#3 Recommendation to Increase Staffing and Funding Effectiveness: As additional funding becomes available, increase temporary/seasonal help to assist biologists in field data collection activities.

The IFM Section's regional management teams are currently between "a rock and a hard place" within a tightening political vice. What is critical at this stage is that meaningful and positive changes be made to increase Division budgets and administrative programs. Sincere efforts by all who are truly concerned about perpetuating Maine's highly valuable fisheries resources are needed to work together in a more cooperative and productive way.

Ninety-one percent (91%) of all people interviewed agreed that a shortage of fisheries staff existed. An attitude of hopelessness about rectifying the situation was apparent. This was probably due in large part to the state budget deficit and associated financial problems.

Two points to consider are: 1) While the state budget picture looks bleak, it does not mean that an increase in staff and funding is not warranted and could not be achieved with sufficient public support; and 2) Plans should be made now for eventual increases in funding and staffing even though actual realization of those positions and funds are not imminent.

With this type of planning done up front, it is much easier to address legislative and constituent questions regarding the need for budget increases. In addition, public support is much easier to generate if those publics know specifics about how money will be used.

The need is greatest for fisheries staff in the regions to work on stream and river fisheries, habitat protection, as well as exotic species introductions. Much of the work done currently is on population surveys in lakes, etc, and many biologists lamented that not enough time was available to do the long-term work on habitat assessment and improvement that is crucial to maintaining a viable fisheries resource. In addition, illegal introductions of exotic aquatic species is a major concern because of the major biological implications and often irreversible damage to natural ecosystems. Additional fisheries staff must be available for monitoring and better control of these situations. This is a much more critical ecological issue than such things as catching an over limit of fish or poaching deer.

If too many fish are caught or too many deer are poached, the biological situation can be rectified by reducing the number of legally harvested fish or deer. However, when exotic plant species or exotic fish species are thoughtlessly introduced into waters, then the consequences often are irreversible. Bass, walleye, and other exotic species introduced into waters with a healthy native species fishery may decrease the native fishery through competition of various kinds (food, space, spawning areas, etc.). There is usually no suitable way to remove the exotic species to correct the situation.

#4 Recommendation to Increase Staffing and Funding Effectiveness: Fill the position of "IFM Supervisor" as soon as possible and proceed with plans to move the position to the Augusta office to better centralize Division senior management and improve day-to-day communications.

This recommendation is currently being implemented and the Department of Inland Fisheries and Wildlife is to be commended for its efforts in this area. This position is key in the management framework for the Inland Fisheries Research and Management Section. Better leadership, management oversight, and effective supervision of the IFM Section is needed. A consistent theme

from interview respondents was that accountability for what and how well jobs were done was not as high as it needed to be.

The responsibility for maintaining accountability rests with this position. Filling this vacancy and moving it to Augusta will provide a stronger statewide platform from which to oversee management in the Division and improve accountability practices for program accomplishments.

#5 Recommendation to Increase Staffing and Funding Effectiveness: Hold the Division Director accountable for keeping the field appropriately informed about status of vacant positions and the rationale for filling or not filling them. Also, hold the Division Director responsible for communicating in a timely fashion with the Bureau Director and the Commissioner's Office regarding vacant position needs.

The Commissioner's Office and the Personnel Division indicate that it takes no longer to fill fisheries positions than for other divisions. In some cases it is true that some positions take longer than others to fill due to vacancy saving efforts on the part of the administration. This was the case in the IFM. Similarly, the decision was made to hold some positions vacant until this review was completed.

However, the other more serious problem seems to be a breakdown in the communication from the Division Director up through the Bureau Director to the Commissioner's Office. This breakdown is in regard to the need for filling positions and the timing, as well as a failure of the Division Director to explain status of vacant positions and rationale for such to the field staff. Responses from the Division Director of "I don't know" or "I sent it up the chain and haven't heard" to questions from field staff are insufficient. If a reasonable amount of time has passed after requests for filling positions have been made, the Division Director has the responsibility to seek an explanation and not shrug it off with comments like "I haven't heard anything."

Decision Making Processes (Policy and Direction Setting)

We will either find a way or make one.
—Hannibal

Current Status

Division policies currently revolve around mostly biological matters. The Division has recently received direction from the Commissioner on administrative practices for reporting, communication guidelines, coordination policies, expected behaviors, etc.

It is worth noting that the new "Administrative Policy Regarding Fisheries Management" is the one policy that has met with the most resistance. Those interviewed were asked if they believed the Section or their region was involved in the development of general fisheries policies. Sixty-four percent (64%) of respondents indicated "yes" while thirty six percent (36%) indicated "no".

However, there was a significant level of angst among the fisheries biologists over this most recent policy. Fisheries biologists felt that the new policy had been developed without their involvement; some felt that they were asked to comment on it only as an afterthought. Several biologists expressed the concern that the new policy may have been written by the Sportsmen's Alliance of Maine, SAM, and was "rammed down their throat". These perceptions have created strong resistance to implementation of this new policy. The Division Director seems to have a "hands off" attitude toward this policy and has done little that we could see to help encourage acceptance of the policy by the field. For example, when the Division Director received the draft policy for comment from the Division, he did not send the policy to regional biologists for review and comment, contributing to a lack of buy-in from the field.

The fifteen-year old strategic plan is currently being updated, but is not yet completed. Thus, currently there are no clearly implemented goals to guide decisions of the Division. In addition, there is a lack of policies to put agreed upon goals into action. This is reflected in the inconsistencies voiced by respondents in these areas:

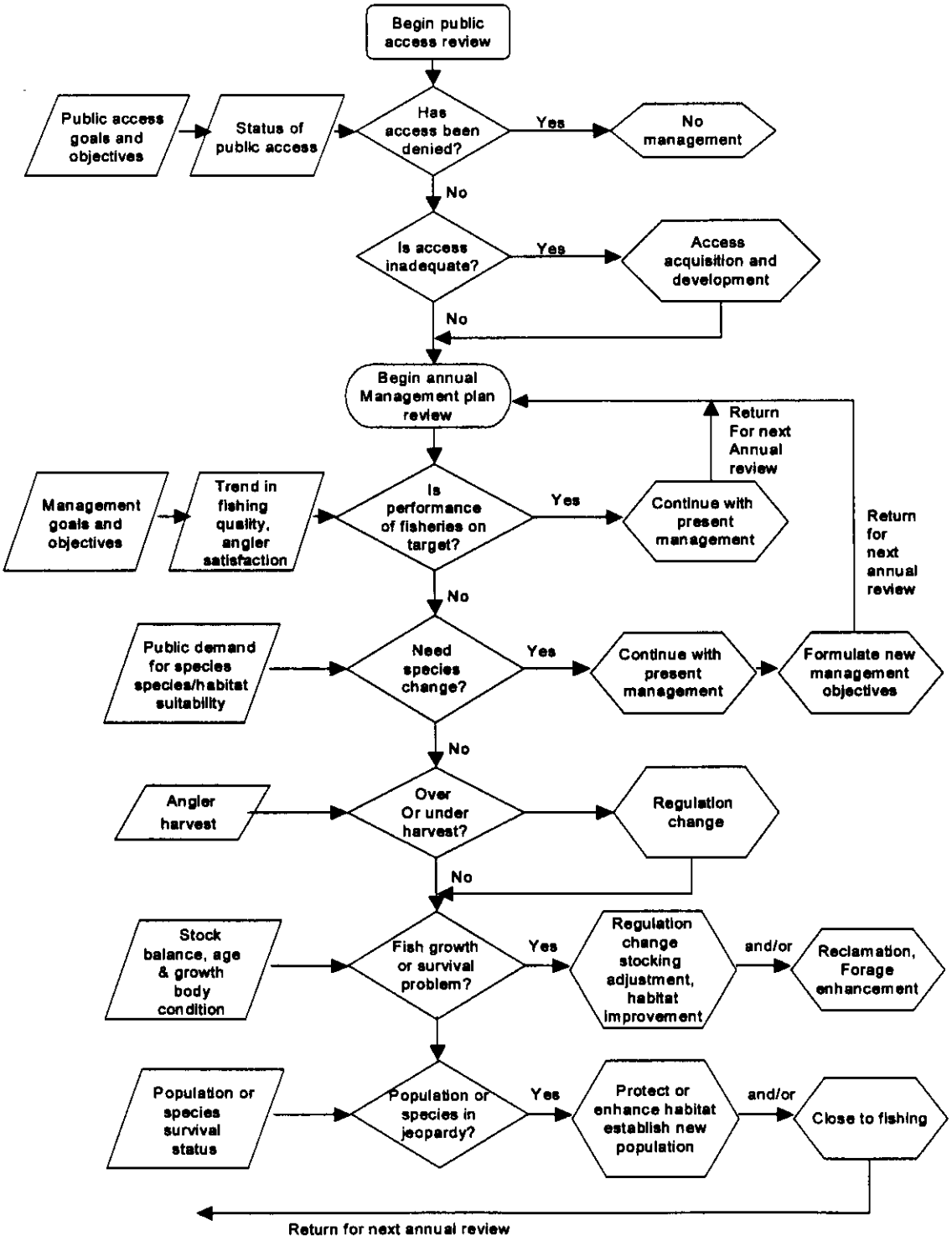
1) Priority areas of work (See discussion in "P*lanning and Budgeting*", Page 28);

2) Inconsistencies in what are believed to be major accomplishments;

3) Inconsistencies in what is believed to constitute customer service.

Responses from the interviews indicated 74 different activities/projects constituting the Division's major accomplishments. Whereas recognizing so many different accomplishment activities is great, there was no agreement on what the most significant accomplishments were. This lack of convergent thinking indicates a lack of direction.

Figure 1. Fisheries Assessment and Decision Process (1991)



Maine Department of Inland Fisheries and Wildlife. 1997. Program evaluation report. Government evaluation act.

When biologists were asked to describe the IFM Section's philosophy toward customer service, three different themes emerged: 1) biologically optimal quality fisheries, 2) the needs of the public as the customer are the priority, and 3) resource protection.

The IFM Section's historic "process" for making management decisions is outlined in Figure 1. This "process" is based primarily upon biological criteria with almost no mention of public input or other criteria such as technical limitations, financial limitations, legal limitations, or socio-political limitations.

The IFM Section has a "peer review" process that is usually adhered to when a region wishes to make significant changes such as stocking a new species of fish in a body of water, or major regulation change. The biologists discuss and comment on the change, with final decisions made by the Division Director as to what to propose for regulation changes, etc. In the past there has been a system of up to fourteen different committees within the Division that review information for decisions:

— Regulations
— Hatchery, Fish Quality
— Creel Survey
— Esocid Management
— Planning
— Fishing Derby/Bass Tournament
— Anadromous-Freshwater Conflicts
— Bass Management
— Data Management
— Hydro-acoustics
— River Survey Guidelines
— Bait Dealers & Licensing
— Angler Questionnaire
— Report Format

The peer review is a valuable process and provides the "collective wisdom" of all the IFM Section's fisheries biologists on important decisions. Public hearings are mandated by law for regulation changes and these processes are followed with the Advisory Council making the final decision on such issues. When fisheries employees were interviewed, there was unanimous agreement that Department/Division policies existed that governed the IFM Section. When asked if they were familiar with the policies, eighty percent (80%) indicated they were familiar with the policies governing fisheries management. Some employees even produced the policy manual in three-ring binder form. Only twelve percent (12%) of employees indicated they were not familiar with policies governing the IFM Section staff. The few remaining respondents indicated they were only somewhat familiar with the policies. As stated earlier, our observations are that these policies are restricted mostly to biological criteria for decisions.

Eighty three percent (83%) of biologists in the IFM Section indicated that Department/Division policies were followed by fisheries staff. Only one respondent indicated they believed Division policies were not followed but still indicated that general Department policies were followed. Sixty percent (60%) of administrative staff believed that fisheries staff followed policies. While twenty percent (20%) of administrative staff believed policies were not followed and another twenty percent (20%) believed they were followed somewhat.

Discussion

Another indication of ineffective decision-making, policies and implementation processes is the lack of agreement on priority areas of work. High levels of agreement and consistency would indicate consistent decisions, good follow-through, and good communication and implementation processes. When those interviewed were asked to name the priority areas of work, answers were extremely diverse. This is an indication of unclear direction at the Division level. Some priorities were mentioned more often than others with the top three being: 1) Hatchery production and stocking, 2) Cold water fish management, and 3) "Keep Maine fishing good".

All interview respondents agreed that specific areas of emphasis were different between regions. The general consensus was that this was warranted due to regional differences in species of fish, fish habitats, and angling pressure. This makes sense from a purely biological perspective and should apply to biological considerations. It does not fit necessarily with decisions regarding public involvement processes, accountability procedures, etc.

Regional autonomy was an area that came up during the focus group discussions as an area of concern. When interviews were conducted, forty-three percent (43%) of the administrative staff said that they did not feel the regions effectively supported the overall mission and strategies of the IFM Section's Program with the regions current level of autonomy. The Advisory Council had sixty-seven percent (67%) indicating they felt the regions were effectively supporting the Division direction with current levels of regional autonomy while the remaining Advisory Council members (33%) did not. Not surprisingly, eighty-eight percent of the biologists interviewed believed the current level of regional autonomy provided effective support of the IFM Section's mission and strategies.

When the question was asked, *"What drives decision-making processes regarding Inland Fisheries Management priorities"*. Eighty percent (80%) of the responses were encompassed by four major themes:

1. Twenty-eight percent (28%) believed public demand drove decisions
2. Twenty-three percent (23%) believed biologists drove decisions
3. Eighteen percent (18%) were in the middle ground believing that public needs tempered by biology drove decisions
4. Thirteen percent believed that politics drove the Section's decisions

These answers indicate an underlying dichotomy of beliefs. There is a struggle between two major factors: either public demand and politics drive fisheries management decisions or biology drives them. Only eighteen percent (18%) of the responses

indicated a paradigm that biology and public demand/politics can work together for better, more informed decisions.

Interviews with Advisory Council members, fisheries biologists, Department administrators, and constituents included the question, "*What, if any, policies need to be clarified in regard to setting and pursuing direction for the IFM Section's program?*" A majority of Advisory Council members indicated they either didn't know or that no policies needed to be clarified. Forty-eight percent (48%) of the fisheries biologists indicated that no policies needed clarification, twenty-two percent (22%) of the biologists said the new "Administrative Policy Regarding Fisheries Management" needed clarification, and seventeen percent (17%) of biologist responses indicated clarity of the policy regarding management of exotic species was needed.

Responses from Department administrators indicated that sixty-seven percent (67%) believed no policies needed to be clarified. All of the constituents interviewed believed policies needed clarification. The constituents were evenly split in their responses between three policy categories recommended for clarification: 1) Management of invasive species, 2) Management of non-game species, and 3) Stocking of anadromous fish species.

Leverage Areas

- Public participation strategies
- Internal Communication

RECOMMENDATIONS

#1 Recommendation to Increase Decision-Making Effectiveness: Develop a Department/Division policy that establishes criteria and responsibilities for the regulatory process, including a clear definition of "substantial management change" that can be applied across all regions.

There was considerable concern voiced by fisheries staff about the recently enacted legislative requirement for public review of "substantial management changes"; and the requirement for public hearings prior to any such changes. Some confusion exists in the interpretation of "substantial management changes"; although most regional biologists had established personal thresholds based on their interpretation and some official clarifications. The perceived vagueness in this new requirement could be further clarified and reinforced by a Department definition and policy.

#2 Recommendation to Increase Decision-Making Effectiveness:
Implement recommendations 1, 2 and 3 in the "*Public Involvement*" part of this report, Page 22.

The current IFM Section's decision process currently revolves almost totally around application of biological criteria as illustrated in Figure 1. These criteria are embedded in fisheries policy and are followed well as reflected in the biologists' responses to questions about awareness of policies and following of those policies.

Significant weakness in the Division's decision process is not in the policies related to application of biological criteria to decisions. The weakness is that biological criteria appear to be used almost exclusively in making decisions within the Division. Out of twenty-seven boxes in the decision criteria flow chart in Figure 1, only one box (Public demand for species and species habitat suitability) mentions the public as part of the criteria. While biological parameters must be followed, the Division should also consider the other parameters for management decisions regarding a public resource. Specifically, see the parameters listed in the decision pentagon in the "*Public Involvement*" segment of this report, Page 24.

Currently the IFM Section appears to base their regulation and stocking decisions primarily on biological parameters and depend on the public hearing process to settle any disputes. More public involvement and conflict resolution work with publics prior to legislatively mandated hearings would result in better decisions and reduced levels of conflict. See "*Public Involvement* ", Page 22, regarding training for fisheries biologists in this area; and, "*Personnel Leadership*", Page 7.

#3 Recommendation to Increase Decision-Making Effectiveness:
Commissioner should mandate communication processes for administrative staff, and hold the Deputy Commissioner, Bureau Director, and Division Director accountable for implementing and following these policies (See *Communications: Internal and External"* segment of this report, Page 13).

When biologists were asked, *"What strategies, systems, or processes do you have to give input to administrators?"*, most responded that they passed along information/questions to the Division Director through direct dialogue. There was high trust from the field in the Division Director's decisions on what to pass along. Currently there is little communication between the field and upper administration except for communication to the Division Director from the field. The field biologists expressed

great satisfaction with communication with the Division Director. However, communication upward and downward in the chain of command at the Division administrative level is like "a marble in a water pipe", restricting flow both upward and downward. See *"Communications: Internal and External"*, Page 13.

Effective implementation of administrative policies and direction regarding public involvement and proper attitudes and behavior for working with publics are greatly inhibited due to lack of communication flow and follow-through. This responsibility should flow from the Commissioner to the Deputy Commissioner to the Bureau Director to the Division Director to the IFM Supervisor and finally to the regional biologists.

The Commissioner believes strongly in using the chain of command and sending directives down through "appropriate channels". However, the procedure of following chain of command is effective only if each subsequent position in the chain effectively does its part. Currently this isn't the case. In the short term, the Commissioner will need to follow-up on his directives and break the chain of command when necessary, working directly and often with the new IFM Supervisor.

The result of both upward and downward communication stopping at the Division Director's level is that field biologists have a strong feeling of disenfranchisement with the Commissioner's office. Almost ninety percent (89%) of biologists reported they did not feel there was genuine and effective support from the Commissioner's office for the IFM Section. At the same time, the close contact and communication the Division Director has established with field biologists is responsible for multiple expressions of strong trust and support, as well as dependence on the Division Director.

One hundred percent (100%) of the Advisory Council members and constituents interviewed believed that there was strong and effective support from the Commissioner's office for the IFM Section. They based their beliefs upon their personal experiences with the Commissioner in public hearings, regulation meetings, and private conversations as well as the Commissioner's decisions and actions of which they were personally aware. Examples of comments from this group included:

- *"Commissioner believes resources come first above politics."*
- *"From the Advisory Council perspective, the Fisheries Division seems to be as well supported as any other division."*
- *"The Commissioner's Office leadership in the hatchery initiative, improving field equipment and facilities, etc.*
- *The Commissioner comes out publicly with answers he grounds in his people's data.*

Resource Management Practices

Shun those studies in which the works that result die with the worker.
— Leonardo da Vinci

The Scoping Phase of this review revealed resource management concerns in the following eight areas:

1) Regional management philosophy
2) Biological limitations to management programs
3) Management of illegal or unauthorized introductions (especially of exotic species)
4) Aquatic habitat protection
5) Function of the research group
6) Providing public access
7) Biological impacts of practices like bass tournaments and bait fishing
8) Proactive versus reactive strategies for identifying biological needs/issues

Findings for each of these content areas will be reported individually below with recommendations consolidated at the end of this section

1. Regional Management Philosophy

Current Status

The common management philosophy throughout all regions can be described as: *"To provide maximum fishing opportunities based upon the biological capabilities of the waters being managed."* Individual regions have a diversity of aquatic habitats and species, as well as differing public desires and degrees of angling pressure that form the basis for a region-by-region philosophy and varying approaches to management. Hence, the regions operate in a fairly autonomous manner, with apparently few written statewide management policies or directives from the Division's state office.

Species management plans (most of which are currently under revision) set broad management objectives for individual species, but how or if individual regions contribute to those objectives is essentially left up to the regional biologists in each region. Quality control is maintained in fisheries programs through data collection guidelines, peer review of reports, public review processes, and statewide networking. In general, the biologists reported their "biggest shortcoming" was not being able to always complete written technical reports in a timely manner.

The individual regions are managing their fishery resources by water body or groups of similar water bodies based upon habitat characteristics, recognized important species, principles of sustainability, and public desires. Biological data provide the basis for management decisions and proven regulatory controls (e.g., slot limits) are used to maintain and enhance fishing opportunities. This management approach is biologically

sound, effective, and appears to be working well overall in the regions. However, the regional programs could be strengthened by improved direction and oversight from the Division's state office, increased technical support to regional management, and implementation of a consistent statewide approach for developing written management plans specific to each region's management programs.

Discussion

Regional staff, in concert with public interests, indicate a growing concern about protection of aquatic habitats and fishery resources, particularly protection of wild native fish populations. Regional management programs are, for the most part, strongly oriented towards lakes and ponds where access is easier and fishing pressure the greatest. There is a wealth of biological data, including angling use data, on lakes and ponds (about 80% have been biologically surveyed), but little information on rivers and streams. Other jurisdictional agencies (e.g., Maine Division of Marine Resources) sometimes complicate river and stream management. To collect more detailed biological information on rivers and streams, all regions need additional staff.

Statewide direction for management is generally lacking at present. There is no discernable management framework currently in place and functioning. There is a perceived disconnect between statewide plans, regional plans, and regional programs. This condition is illustrated by the divergence in answers when Division and IFM Section personnel were asked what the IFM Section's priority areas of work were (see sections on "*Decision Making Processes* ", Page 40, and "*Planning and Budgeting*" , Page 28.

There is a current effort at the state level to update the Inland Fisheries Management Strategic Plan, and, in theory, make it the template that drives statewide and regional management initiatives; however, few biologists seem to be aware of the details of or are supportive of this effort. For example, species management plans are a fundamental component of the strategic plan, but most biologists view the species management plan approach as too broad to facilitate effective management at the regional level. They are correct in that individual fisheries (e.g., large lakes, ponds with similar habitat, rivers, similar type streams) need specific management goals and objectives. However, what they are apparently not aware of is that the next phase in the strategic planning process is to step-down the species management plans into annual work plans that integrate species management in bodies of waters around the state—and that these annual work plans should be used to prioritize work assignments and tie priorities to budget allocations.

Additionally, few, if any, biologists or others in the agency seem confident that the strategic plan will actually be implemented. Related to this theme, many in the IFM Section are aware of a new fisheries management policy, titled "Administrative Policy Regarding Fisheries Management", developed outside of the Division; however, most biologists knew little about its content and don't know when, if at all, it will be implemented. Much disapproval was expressed about the process used to develop this new policy, namely, the perceived total lack of regional involvement in the process. The

issues described here exemplify several recurring weaknesses in the Division and IFM Section: lack of effective communication, lack of effective plan implementation, and lack of effective policy and direction setting.

Other components of regional fish management philosophies investigated were:

1. Effective support at the regional level for the overall mission and strategies of the Division and IFM Section;
2. Whether or not differences in regional management philosophies and approaches lead to inconsistencies or conflicts in management practices;
3. Integration of nongame species in fish management work.

Sixty-two percent (62%) across all groups of respondents said there were inconsistencies between the regions, especially dealing with stocking strategies, management of exotics, and biases about species and habitats types. However, there was 100% agreement in all groups interviewed that there is a need to manage the resource differently in different regions. The universal reasons given for this included differences in: geography, fish species, biology, human population distribution and density, user group needs, and ecology of waters.

Additionally, 32% of respondents indicated that there were management inconsistencies within some regions. These were attributed to politics, lack of direction, lack of experience, serving diverse user needs, and differences in habitat quality and type.

Regarding integration of nongame fish and wildlife species needs, 64% of respondents supported the idea that the IFM Section integrates these species in management strategies either directly or indirectly. This is accomplished through consultation with fish and wildlife staff, and general habitat evaluation and protection work. Eighty-four percent (84%) thought these approaches were effective; however, those who didn't think so sighted biases toward game species, lack of funding and/or time, and resistance to embracing this area of responsibility.

2. Biological Limitations to Management Programs

Current Status

Numerous natural biological limitations (e.g., lack of adequate spawning habitat in some waters, low productivity in others) and man-caused impacts are affecting fishery management programs across the state. The types of limitations and degrees of impact vary from region-to-region and are based upon several factors to include: existing habitat conditions and amount of undisturbed terrestrial and aquatic habitats in a watershed; human population densities and growth patterns; past and present land use patterns; water pollution from surface runoff and point sources; extent of exotic species introductions and competition with native species (e.g., bass expanding into trout waters); and availability of forage fish (e.g., smelt) in lakes and ponds. Recent warming trends, coupled with loss of riparian vegetation and major changes in forest canopies in

some areas, are causing significant changes in summer flows and increasing water temperatures, which are adversely affecting habitat quality in some streams and lakes. Recharge of lakes and streams is also being influenced which can affect spawning and rearing success of certain species and over-winter survival, particularly in small streams and ponds.

Discussion

Exotic species introductions are considered the most significant biological limitation to fisheries management programs; this is closely followed by habitat degradation of streams caused by long-term logging impacts. These impacts limit fishery capability and can require extensive and expensive restoration programs. Regions are trying to manage conservatively given the biological limitations and impacts affecting habitat quality. Much effort is directed at protecting wild fish populations, but biologists are concerned that some segments of the public believe that increased stocking will solve all problems.

Several examples were given where water quality degradation in lakes has altered the natural habitat and resulted in a change in management capability, and, consequently, objectives. For example, in waters that no longer support a lake trout fishery, management has shifted to brown trout that can better tolerate degraded water quality. It is a common belief that cumulative and long-term degradation of aquatic habitats from various sources (e.g., timber harvest and associated road/trail construction, agriculture and irrigation, subdivisions, etc.) are impacting future options. Also, several regions are concerned that Atlantic salmon restoration programs have significantly affected other fishery management options.

3. <u>Illegal or Unauthorized Introductions (Exotic Species)</u>

Current Status

The introduction of exotic species (i.e., non-native to Maine waters) is a major concern statewide, particularly for the relatively recent introduced species that fall within the regulatory category of "illegal". The illegal introduction of exotic warm water species (e.g., largemouth bass, black crappie) is greatly affecting coldwater fisheries. For example, today there are at least 196 more bass waters in Maine than existed in 1991.

All regional staff view illegal introductions as one of the most serious threats to Maine's inland fisheries. They expressed deep concerns with the continuing increase in illegal introductions and subsequent spread of exotics throughout the state, especially near high human population centers. They are knowledgeable about existing adverse effects resulting from these introductions and the growing potential for future impacts to statewide and regional management programs. Exotic species introductions are perceived to drive regional programs by limiting management options and increasing costs, as well as exemplifying failure of minority publics to accept management decisions to exclude exotics from certain waters.

Discussion

Most biologists feel at a loss to deal with this issue, although it is obvious there has been considerable thought and effort directed at this problem and its potential resolution. They recognize that few, if any, management scenarios can really be effective (e.g., eradication) after species have been introduced into large lakes, ponds, and streams. Hence, they are highly frustrated in trying to deal with this threat and have not seen much success even though efforts have been made to increase public education, improve enforcement, and conduct species control in a few small areas. All regions strongly believe that the only hope is for major increases in the Department's I & E Division efforts to improve public awareness and increase law enforcement effort that lead to convictions of violators and stiffer penalties.

A common belief among regions is that some of the fishing guides and private property owners on some lakes are "taking management in their own hands" and participating in illegal fish introductions, particularly bass, to try and expand their fishing opportunities. Most regions feel the need for more definitive policy and program direction from the state office on this issue. In the past, the Department has "sent mixed signals on exotics" by initiating projects like rainbow trout stocking. Also, there is resentment that the prevention program to control exotic milfoil has gained momentum very quickly, when the real issue is the spread of all exotics, a cause that the Division has been championing, with little or no public response.

4. Aquatic Habitat Protection

Current Status

Protection of high quality aquatic habitats is a major concern in all fisheries regions. The Maine Department of Environmental Protection (DEP) and Land Use Regulatory Commission (LURC) are responsible for issuing state permits for development projects and other land use alterations, monitoring construction activities, and enforcing permit conditions. In conjunction with these permitting processes, fisheries staffs in some regions expend a considerable amount of time and energy in providing biological input and recommending mitigation measures. A draft Memorandum of Agreement (MOA) with DEP is being developed in one region to provide standard guidelines for protecting fishery resources that may be affected by development projects.

Discussion

Degradation of rivers, streams, lakes, ponds, and wetlands is increasing statewide and is definitely affecting fishery habitat quantity and quality, as well as fishing opportunities. The type and degree of impact vary depending upon the region. Direct impacts include removal of stream riparian vegetation, road/trail construction in floodplains, and dewatering ponds for irrigation. Indirect impacts include increased surface runoff and

loss of recharge capability, greater siltation of fish spawning habitats, and increased water pollution and temperature.

Compliance monitoring of state permits is not considered a Department responsibility, and no one in the Division has time to do it; however, if apparent violations are observed in the course of conducting other field activities, the biologists contact the landowner and/or appropriate agency to rectify the problem and implement corrective actions. The regions felt that enforcement of permits could be substantially improved, especially on logging activities being conducted under the LURC general standards. A standardized statewide classification system for habitats and a computerized GIS mapping system for fishery habitats would greatly facilitate habitat work in the IFM Section.

5. Function of the Research Group

Current Status

The research group within the IFM Section of the Division is viewed by most regional personnel as two very good people who try to assist the regions as much as possible, but who have little guidance from the Augusta Office with respect to regional management needs and priorities. Although there is a process for submitting research proposals and the regions have in the past provided a list of "research needs," few have been pursued. It is generally perceived that this is due primarily to a lack of adequate funding and research staff. The Maine Cooperative Fish and Wildlife Research Unit at the University of Maine (Co-op Unit) has conducted most of the fisheries research projects that have been accomplished. Many biologists felt that most of the "products" coming out of the Unit provided little information useful for management purposes. Of the in-house research that is being done, most is done at the regional staff level, further eroding staff time available for data collection and implementation of management programs.

Discussion

Currently, there are too few positions on the research team to meet regional and statewide fisheries management research needs. Also, rather than conducting true research, the current function of this group appears to be one of technical assistance. Hence, the term "research" is a misnomer and the organization title should be changed to better reflect the team's primary role of technical assistance. The team could still coordinate the Division's research needs internally with the Co-op Unit, provide oversight of small research projects, assist in management of statewide data, and continue to provide technical assistance to regional management programs.

Technical assistance should include the maintenance of statewide data sets, standardization and development of management techniques, training, classification systems, digital mapping, etc. Given the demands for basic fisheries management

around the state, all research and technical assistance endeavors should directly address management needs.

6. Providing Public Access

Current Status

All regions believed they were proactive in trying to obtain new public access and in maintaining existing access. In recent years, public demands for new access has increased while, simultaneously, many private landowners have taken steps to limit access, particularly on lakes and ponds where new subdivisions and summer homes are being constructed. Looking for viable public access locations, e.g., lake shore areas suitable for boat launching and a parking area, and obtaining easements to gain access across private lands from established public roads and trails requires considerable time and effort on the part of the regional fisheries staff. Once potential access locations have been identified, regional staff biologists work closely with the Department's Federal Aid Coordinator to try and secure each identified sight.

Discussion

Public access is considered to be an important priority in most regions. Emphasis on access acquisition varies by region depending on the regional fisheries team involved, ongoing workloads, and available funding. In general, the acquisition process is clearly defined and roles are basically understood in the IFM Section. The majority of responsibility falls on the regional fisheries biologists, who receive assistance from the Federal Aid Coordinator for funding and final acquisition. A statewide priority list exists and is updated regularly; however, specific projects are usually done on an opportunistic basis. This program used to be a function of the Realty Section within the Department; however, this section no longer exists due to budget cuts.

7. Biological Impacts of Practices Like Bass Tournaments and Bait Fish Harvest

Current Status

Bass tournaments and commercial bait fish harvest are both allowed under Department regulation and applicable statutes. Issues related to these two activities appear to be social as well as biological.

Discussion

Although there is little data, some regional biologists have observed what they believe to be increasing impacts on certain warm water species (bass), in some waters, caused by high mortality of caught and released fish in late summer bass tournaments where water temperatures have warmed substantially. Other concerns related to bass tournaments were the decreased survival of bass caught and held in boat live wells with inadequate aeration and the possible impacts of tournament activities on nesting loon

populations on certain lakes. Except in a few locations, commercial bait fish harvest is not viewed by the biologists as having significant impact on fishery management programs. Management of bait fishing is directed primarily at specified waters that have few or no salmonids.

8. Proactive Versus Reactive Identification of Management Needs

Current Status

A concern expressed during the Scoping Phase of this review was that the fisheries management staff was not proactive on biological issues. Primarily, some members of the Constituency Focus Group voiced this sentiment.

Discussion

The interview process of this review revealed evidence that the fisheries field staff has attempted to be proactive on several key issues, including:

1) Protection of wild native brook trout populations in both streams and lakes

2) Dealing with exotic species

3) Trying to effectively address habitat protection issues

4) Identifying research needs

5) Stocking strategies in waters where habitat quality for natural reproduction is poor

6) Enhancing public access

However, there is a difference between being proactive on issues and being successful in addressing them. Staff and funding limitations still dramatically impact how effectively proactive the IFM Section staff can be on many matters.

Leverage Areas

- Strategic planning, stepped-down to operational planning and annual work plans, and tied directly to budget development and subsequent allocations—this provides the roadmap and the parameters for pursuing priorities.

- Clear policy and direction setting—clarifies expectations and enables accountability.

Recommendations ( means requires additional resources)

#1 Recommendation to Improve Resource Management Practices:
Develop regional management plans consistent with statewide species management plans.

Use the strategic planning process to provide clear policy and direction for development of regional management plans, consistent with statewide species management plans. Regional plans should be focused on specific water bodies (e.g., large lakes) and/or categories of similar water bodies (e.g., wild native trout streams, stocked brook trout ponds, etc.) based on habitat characteristics, available fisheries, and public use. Require each region to develop annual work plans based upon the regional management plan goals and objectives, and consistent with Division statewide requirements and overall priorities. Follow this with annual reporting of work activities and accomplishments relative to the region's approved annual work plans. Continue quarterly regional program review meetings between the Division Director, the IFM Supervisor, and the regional biologists to evaluate work progress with respect to the approved annual work plans and discuss management and administrative issues affecting the regions. See "*Planning and Budgeting*" Section, Page 28.

#2 Recommendation to Improve Resource Management Practices:
Increase biological staffing.

As funding becomes available, increase biological staffing in each region so that biological data collection efforts can be expanded to rivers and streams, and include habitat protection and exotic species responsibilities. See "*Funding and Staffing*" Section , Page 34.

#3 Recommendation to Improve Resource Management Practices:
Continue successful regional public outreach (PR) initiatives.

See "*Communication: Internal and External*" Section, Page 13.

#4 Recommendation to Improve Resource Management Practices: Seek additional operating funds and use partnerships to address habitat concerns.

Seek funding from a variety of sources to expand stream restoration projects. For example, pursue opportunities with land and water conservation organizations to expand programs to protect stream and lake buffers and provide conservation easements. [See "*Staffing and Funding*" Section, Page 34. Expand the one regional Memorandum of Agreement with DEP regarding guidelines for protection of fishery resources to a statewide agreement.

#5 Recommendation to Improve Resource Management Practices: Provide clear regulations and procedures to better manage bass tournaments.

Publish a statewide list where bass tournaments will be allowed, based on compatibility criteria. Do not authorize tournaments on any other water body. Promulgate a regulation requiring constant aeration and double aerator systems in live wells of boats involved in bass tournaments. Promulgate a regulation requiring that fish released in bass tournaments be returned to lake locations where originally caught.

#6 Recommendation to Improve Resource Management Practices: Develop an exotic species management program.

Establish a statewide exotic containment/eradication policy on all exotics (including milfoil) and management guidelines for exotic fishes. Intensify the current statewide "Operation Game Thief Program" providing rewards for information on illegal introductions of fish. Greatly expand Department I&E efforts on illegal introductions of exotic fish. The public needs to understand the seriousness of this issue and how, over time, it will result in tremendous impacts to Maine's inland fisheries which are one of the state's most valuable renewable resources. Inland fisheries currently has an economic value exceeding $250 to $300 million/year.

Work with the Maine Legislature to pass stiffer fines and penalties for convicted violators of illegal introductions including loss of equipment used (e.g., vehicles, boats), loss of fishing privileges for specified time frames (e.g., first offense-5 years, second-10

years), heavy fines, and jail time. Because of the ecological impacts of illegal introductions, it is important that wardens put greater priority on increasing their field enforcement efforts to apprehend and obtain convictions of persons conducting illegal fish introductions. One suggestion is to expand enforcement efforts and target selected areas during several weeks in the spring to coincide with pre-spawning of bass.

#7 Recommendation to Improve Resource Management Practices:
Redefine the role and function of the research group; add at least two additional staff and rename.

Change the name of the research group to Fisheries Technical Assistance Team, or another more appropriate title. At a minimum, double the size of this support staff, i.e., add at least two biologist positions to increase support in technical assistance for statewide fisheries programs, regional management functions, and coordination of research needs internally, as well as with the Cooperative Fish and Wildlife Research Unit at the University of Maine. It is recommended that all Division database management responsibilities including species management plan data sets be transferred to this Technical Assistance Team for better statewide data coordination.

The regions should continue to provide an annual listing of research needs and recommendations. Approved research projects should be prioritized on a statewide basis and included in the Division's annual work plan as the budget is developed and/or new funding becomes available. All approved research projects should be designed to meet specific, high priority management needs and should provide useful and timely information that benefits fisheries management across regional boundaries.

When feasible, based upon increased staffing and funding levels, approved research projects that may take several years to complete should be conducted "in-house" by IFM Section fisheries biologists assigned specifically to do research. For shorter duration projects (one to two years), the Division should continue to coordinate with the Co-op Unit or contract out to private consultants. This model is suggested to increase expertise within the IFM Section and to fit with the Co-op Unit's general approach to conducting research with graduate students on a limited time basis.

#8 Recommendation to Improve Resource Management Practices:
Continue efforts to improve and maintain public access.

If a new biologist position were added to each region to work primarily on habitat and exotic species issues, secondary responsibilities could include oversight of the region's public access program.

Technical Skills

"Learning is a by-product of productive activity, just as heat is a by-product of friction"
— Monica Aring

Current Status

This component of the review looked at the IFM Section's knowledge, skills and capabilities in collecting and analyzing data and information, and applying resource monitoring and management techniques. Early on, in the Scoping Phase of the review, it was apparent that the IFM Section's fisheries biologists are competent data collectors, and that they work hard at it. This characterization held firm consistently throughout the review.

The Review Team found that, with some minor exceptions, the data management system that is being developed and maintained by the Division is well accepted by the regional biologists. The statewide standardization of data sets and applications is providing adequate data storage and analysis capabilities for biologists. Data collection and storage of statewide information, e.g., creel survey data, is generally well standardized with application manuals and a data management committee to monitor program and project development.

Some regions have modified and adapted data sets to accommodate individual data analysis needs, and some others have utilized alternate software to develop specific applications to assist in regional management programs. These alternate applications do not appear to compromise the statewide data storage and analysis efforts, and, in fact, probably enhance the capabilities of biologists to manage fisheries in their respective regions. Plans exist to enlarge and improve the data management program, adding other data sets to the statewide inventory.

Most of the IFM Section biologists visited by the Review Team expressed a desire to develop a Geographical Information system (GIS) mapping capability for their programs. This is especially appropriate for stream habitat evaluation programs being developed in several of the regions.

There are some concerns that the data "punching" process is often not dependable and inadequate. Data forwarded to the state office for entry into the agency database does not get entered in a timely manner, requiring duplicate entry at the regional level to assure adherence to report timelines. Some concerns were also voiced about the accuracy of the key punching process. Though there has been and continues to be some Department sponsored computer training opportunities afforded biologists, no formal or mandatory programs exist to train biologists.

There was nearly 100% agreement across all groups interviewed (biologists, administrators, Advisory Council members and constituents) that fisheries biologists did the best they could with the staffing and funding available to inventory and survey lakes and ponds. There was similar agreement that the IFM Section did not have enough personnel or funding to collect all the data that might be needed on all waters. Inventory and survey work on rivers and streams (flowing waters) and on some lesser species of game fish were considered especially lacking. Data on nongame fish species is also lacking.

Among the fisheries management staff, administration, Advisory Council members and constituents there was general agreement (58% agreement, with 5% undecided) that the IFM Section regularly sought new information about data collection techniques, best management practices and new management strategies. Statements among those who didn't agree were to the effect that such things were not encouraged, that time didn't allow it, that techniques didn't change, or that things were simply done the way they've been done for the last 20 to 30 years.

Mechanisms that were cited as means for receiving new technical information were: journals, conferences and professional society meetings, peer contacts, division meetings, workshops, the internet, and researching other states' programs. However, only three of the fisheries biologists in the field were found to be members of the American Fisheries Society (AFS), the professional society for fisheries biologists, and no evidence was found that continuing education opportunities in the form of workshops, conference participation, etc. were made available to many fisheries staff on a regular basis.

Discussion

In the review of technical information and data management conducted by the Review Team a number of observations were made:

- Responsibility for the "data management lead" is often delegated to one or several of the more technically astute in each region.
- Some confusion exists about the centralized nature of data storage and the process to obtain data and reports.
- There is a manual for data collection and analysis, but there is no written policy or procedure for management of biological data within the Division.
- Most biologists understand that the current centralized data storage program was developed to support the strategic planning process and some feel the system is not fully meeting regional management needs in the current format.
- Species management plan authors maintain control of data on specific species, e.g., Atlantic salmon.
- Data entering ("punching") is duplicated sometimes up to three times due to some biologist's personal needs and desires as well as mistrust of the

system. Also, fisheries data are perceived to receive a low priority (as compared to wildlife data), often taking considerable time to get "punched" at the state office level.

- A data management committee exists to coordinate data management programs; however, some regions did not feel adequately represented on this committee.
- Department standards for software are Microsoft Suite (MS) applications and Statistical Analysis Software (SAS).
- Regions maintain their own data sets, but are required to send certain data sets into the state office, e.g., creel census, gill netting, stream evaluations, water quality, hydro-acoustics surveys, stocking, commercial fishing, etc.
- Most existing statewide data sets are well standardized.
- Most regions have a large backlog of old data that is being filed electronically on an "as time available" basis. Data from recent years is being recorded, analyzed, and entered into computer databases in a more timely fashion.
- Guidelines exist to modify data sets and authority is granted to do so. SAS modules are not "right protected," allowing biologists to personalize them for their specific needs.
- Some regions desire more flexibility to build databases and data set designs and to select software (e.g., MS Access). Most were content with the SAS applications.
- There is no formal computer-training program. Biologists have received some general training in computers, but feel more would be beneficial.
- There is currently no Geographic Information System (GIS) capability in the Division, and it is felt that this would be valuable to support existing and future management programs.
- Maine's Department of Environmental Protection (DEP) administers a statewide water quality classification system, but there is no formal statewide aquatic habitat classification system tied to fisheries.

Data collection is one of the IFM Section's recognized strengths. Current challenges for the IFM Section in this area involve:

1) Finding ways to collect and analyze biological data on more waters, especially rivers and streams, and on more fish species,
2) Developing the capacity to inventory and assess stream and river habitats,
3) Developing and managing data in a collaborative way to maximize its value and applicability, and
4) Provide staff with training and other professional development opportunities to facilitate success in these areas.

It's time for this general aspect of the IFM Section's program to move to the next level.

Leverage Areas

- Standardized procedures for data collection and management supported by written policy
- Computer based database management systems, including Geographic Information System (GIS) capabilities
- Staff development plans (training, professional meetings, etc,)
- Public support for scientific data collection

Recommendations

#1 Recommendation to Improve Technical Skills: Continue to standardize data collection and centralize database management.

The Division and Section are moving in the right direction with their data management system. Efforts should continue to consolidate and refine data collection and management. They can be improved with the following four steps:

- Transfer all Division database management responsibilities including species management plan data sets to the Research Section (renamed Fisheries Management Technical Assistance Team) and provide additional staffing to support this data management function. See *"Resource Management Practices"* Section, Page 47.

- Develop written guidelines for use and adherence to procedures in the data collection handbook. Continue to standardize statewide data and reporting needs, but allow flexibility for regional data management within the standardized statewide system.

- Where standardized data collection forms for specific types of biological information are not in use, develop appropriate forms and corresponding procedures, and apply in all regions. This will help ensure that similar types of biological data are comparable when compiled and analyzed across regions.

- Integrate data from the Wildlife Division Habitat Assessment Section and the fisheries database into a comprehensive agency-wide data management format with full GIS capability.

#2 Recommendation to Improve Technical Skills: Provide additional technical training to IFM Section staff.

Continuing education opportunities are important to maintaining credible and effective fisheries management programs. A commitment to establish and implement professional development plans for each staff member should be made. At a minimum these development plans should initially include:

- A data management and computer training program for regional biologists and assistant regional biologists.
- Stream and river habitat inventory and analysis training, to include training with a newly developed habitat analysis and procedures manual, and an aquatic habitat classification system. See "*Resource Management Practices*" Section, Page 47.
- Opportunities for all biologists to attend professional meetings and conferences on some sort of a regular schedule or plan.
- See "*Personnel Leadership*" Section for more on staff development needs, Page 7.

#3 Recommendation to Improve Technical Skills: Improve inland fisheries habitat assessment abilities and capabilities.

A more complete discussion of aquatic habitat protection needs is found in the "*Resource Management Practices*" Section, Page 47. It is mentioned here because knowledge, skills and abilities in this area need to be enhanced. Not only can biologists benefit from training in this area, but also the IFM Section needs to add more structure and definition to this program area. At a minimum, the Division and IFM Section should develop a flowing water habitat analysis and procedures manual (a "standards" manual) and an aquatic habitat classification system.

CONCLUSION

"Change is disturbing when it is done to us, exhilarating when it is done by us.
-- Rosabeth Moss Kanter

This review looked at the Inland Fisheries Management Program in seven (7) areas of concern listed in the Legislative mandate for the review. The Review Team added communications as an eighth area to evaluate. Whereas program strengths and weaknesses were found in all eight areas investigated, three performance areas can be considered key in leveraging actions for improvement — *Personnel Leadership, Communications, and Public Involvement.*

Of the thirty-six (36) recommendations listed in the report, those providing the greatest leverage for improvement involve these five (5) strategies:

1. Hire a competent leader/manager/supervisor for the currently vacant **IFM Supervisor** position,
2. **Move the current Division Director** to the Commissioner's Office as a special assistant in charge of institutional transition,
3. Adopt and commit to an effective **Public Involvement Program**,
4. Implement an effective **Operational Plan** to carry out the new Inland Fisheries Strategic Plan, and
5. Execute effective **employee evaluations** to achieve these results.

Improving performance in these organizational management functions will automatically improve performance in almost all other areas that were identified as needing improvement. Likewise, it will enhance performance in those areas identified as strengths.

This report is submitted with confidence that the Department, Division and IFM Section are prepared and capable through their dedication and the insights gained as a result of this review, to embrace the suggestions contained herein and effectively transition into the 21st century — both as stewards and facilitators of the conservation and utilization of the inland fisheries resources in the state of Maine.

APPENDIX

LIST OF RECOMMENDATIONS

Personnel Leadership

1. Commissioner needs to hold the Deputy Commissioner responsible for communication and follow through with the Bureau Director regarding implementation of Commissioner policies and directives. Accountability performance indicators must align with this strategy.

    1.1 Deputy Commissioner needs to hold the Bureau Director responsible for communication and follow-through with the Division Director regarding implementation of Commissioner policies and directives. Accountability performance indicators must align with this strategy.

    1.2 Bureau Director needs to hold the Division Director responsible for communication and implementation of Commissioner policies and directives. Accountability performance indicators must align with this strategy.

    1.3 Division Director needs to hold the IFM Supervisor responsible for his role in communication and implementation of Commissioner policies and directives. Accountability performance indicators must align with this strategy.

2. Create a special assistant to the Commissioner with responsibility for managing transition of current senior biologists, and passing along both institutional memory and current best practices to the next generation of fisheries biologists in the IFM Section.

3. Institute a system of employee rewards which recognizes competencies and capabilities in supervision and management. (This includes both positive rewards and clearly not rewarding poor performance.)

4. Create a staff development program for all IFM Section personnel, including training on leadership and supervision skills for supervisory personnel.

Communications Internal and External

1. Hire an effective leader/supervisor/manager to fill the IFM Supervisor position.

2. Clarify and define the roles and responsibilities of the Division Director and the IFM Supervisor and their relationship to each other.

3. Clarify Divisional policies or guidelines related to communications and outreach.

4. Develop and diligently implement an internal Fisheries and Hatcheries Division communications strategy which includes written as well as other formats.

5. Fisheries and I & E Divisions collaborate to develop and implement a public outreach plan for the Fisheries Division and IFM Section.

6. Align outlying Law Enforcement Sergeant Section boundaries with the boundaries of the Fisheries/Wildlife Management Regions.

Public Involvement

1. Establish and promote a written Department/Division philosophy about what public involvement is and what it represents, as well as how it "fits" into the biological management of natural resources.

    1.1 Commissioner and Division Director jointly promote a common public participation definition and philosophy.

    1.2 Provide training for all staff in Division administration and the IFM Section on public involvement philosophy, approaches, and techniques.

2. Add rigorous methods to gather human dimensions data (public attitudes, preferences and desires).

3. Establish employee rewards for public involvement.

Planning and Budgeting

1. Division Director and other administrative staff express and demonstrate strong support for an annual work plan process that includes all work done in the IFM Section and ties to overall strategic direction.

2. Establish a system of annual work plans that covers all work done in the Division and ties back to overall strategic direction.

    2.1 Have the IFM Section planner work with regional fisheries staff to develop the final format for annual work plans and coordinate all work plans with the next budget cycle after the strategic plan is completed.

3. Involve publics within each region in development of regional objectives that address the overall statewide goals/objectives and apply them to specific regional waters.

4. Train regional fisheries staff to develop regional budgets based upon annual work plans.

Staffing and Funding

1. Pursue multiple avenues for increasing funding and staffing for the IFM section.

2. Develop detailed justifications and prioritize IFM Section staffing needs with the goal of adding, at least one, new, full-time fisheries biologist position to each region over the next two years. The duties of these positions should be to work primarily on habitat protection (including riparian areas) and exotic species issues.

3. As additional funding becomes available, increase temporary/seasonal help to assist biologists in field data collection activities.

4. Fill the position of "IFM Supervisor" as soon as possible and proceed with plans to move the position to the Augusta office to better centralize Division senior management and improve day-to-day communications.

5. Hold the Division Director accountable for keeping the field appropriately informed about status of vacant positions and the rationale for filling or not filling them. Also, hold the Division Director responsible for communicating in a timely fashion with the Bureau Director and the Commissioner's Office regarding vacant position needs.

Decision Making Processes

1. Develop a Department/Division policy that establishes criteria and responsibilities for the regulatory process, including a clear definition of "substantial management change" that can be applied across all regions.

2. Implement recommendations 1, 2 and 3 in the *"Public Involvement"* part of this report, Page 22.

3. Commissioner should mandate communication processes for administrative staff, and hold the Deputy Commissioner, Bureau Director, and Division Director accountable for implementing and following these policies. (See "*Communications: Internal and External"* segment of this report, Page 13.)

Resource Management Practices

1. Develop regional management plans consistent with statewide species management plans.

2. Increase biological staffing.

3. Continue successful regional public outreach (PR) initiatives.

4. Seek additional operating funds and use partnerships to address habitat concerns.

5. Provide clear regulations and procedures to better manage bass tournaments.

6. Develop an exotic species management program.

7. Redefine the role and function of the research group; add at least two additional staff and rename.

8. Continue efforts to improve and maintain public access.

Technical Skills

1. Continue to standardize data collection and centralize database management.

2. Provide additional technical training to IFM Section staff.

3. Improve inland fisheries habitat assessment abilities and capabilities.

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